

**MANAGERS' PERCEPTION OF THE EFFECT OF BUSINESS  
COUNTERFEITING ON THE STRATEGIC GROWTH OF KENYA  
SEED COMPANY**

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## DECLARATION

I hereby declare that this research project is my original work and has not been submitted elsewhere for examination, award of a degree or publication.

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## **DEDICATION**

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## **ABBREVIATION AND ACRONYMS**

|                |   |  |
|----------------|---|--|
| <b>ACA</b>     | - | Anti Counterfeit Authority                           |
| <b>KSC</b>     | - | Kenya Seed Company                                   |
| <b>KHEPHIS</b> | - | Kenya Plant Health Inspectorate Service              |
| <b>OECD</b>    | - | Organization of Economic Cooperation and Development |
| <b>R&amp;D</b> | - | Research and Development                             |

## **ABSTRACT**

Academic discourse has inadequately addressed counterfeiting, specifically its link to strategic growth, leading to ambiguity regarding its impact on strategic growth. This study aimed to fill this gap using the Kenya Seed Company as a case study. The objective of the study was to determine managers' perceptions regarding the impact of business counterfeiting on the strategic growth of Kenya Seed Company. The study employed a case study design, this approach fulfilled the necessity for depth and comprehensive exploration needed to effectively achieve the objective. The study gathered primary data from 9 interviewees, and secondary data from select company records and reports followed by a thorough data analysis through thematic analysis and descriptive statistics. From data analysis, the study found that business counterfeiting adversely affected market penetration, primarily through reputational damage and substitution effects. Additionally, the study found that business counterfeiting impeded the success of diversification by eroding brand integrity and consumer trust. Further, the anti-counterfeit measures placed financial constraints on Kenya Seed Company, limiting resources for crucial innovation and research which is necessary for product development. In conclusion, counterfeits not only impede future growth prospects but also restrict profitability, thereby compromising the viability of strategic growth. Based on these findings, the study suggests several recommendations; the recommendations to Kenya Seed Company include intensifying consumer education initiatives in newer markets, reinforcing the supply chain against counterfeiting, improving corporate governance to minimize corruption and theft and strengthening quality control measures throughout production and distribution. Finally, the study recommends that Kenya seed company should conduct a thorough market assessment before entering new markets, especially those characterized by prevalent counterfeiting. Regarding future research, the study recommended a comprehensive study encompassing the psychological and social factors influencing consumer choices of counterfeit seeds.

# **CHAPTER ONE: INTRODUCTION**

## **1.1 Background of the study**

Counterfeiting has become an interminable threat to businesses in developing and developed countries. Exasperated by weak legislation, technological advancements, lack of consumer awareness, and supply chain deficiencies (Karingu, Patrick, & Ngugi, 2013), this infringement on intellectual property threatens business survival and viability. Undoubtedly, Intellectual property is crucial for value generation and success in competitive markets (OECD & EUIPO, 2016). Infringements stifle innovation and investment and reduce returns due to eroded brand reputation and customer loyalty, and high verification and enforcement costs (Stevenson & Busby, 2015). Furthermore, counterfeits introduce competitive pressure in the market to the detriment of genuine producers (Buratto, Grosset, & Zaccour, 2015). These outcomes ultimately frustrate strategic growth.

This study was anchored on two theories; Resource-based theory and five forces of competitive advantage theory. Firm resources are instrumental in responding to counterfeiting; firms may require enhancement of the available resources to achieve inimitability (Stevenson & Busby, 2015). Porter (1979) identified five forces that govern profitability; new entrants, substitute products, power of suppliers, and buyer power. Since counterfeits are a calculated re-production and sale of genuine products (Buratto et al., 2015), they produce substitution effects (Qian, 2014). Substitutes limit the potential of an industry and hamper earnings and growth (Porter, 1979).

The motivation of the study was to fill the existing literature gap as far as the impact of counterfeiting on strategic growth is concerned. Research focuses on the fashion, medicine, and music industries; the seed sector has received less attention from Past studies, and its crucial role in agriculture worldwide has not been communicated effectively (Martin, 2019). The growth and success of the seed sector are necessary for national development and the attainment of economic growth (Ministry of Agriculture[MOA], (2010). Persistent outcry by seed companies and players in the seed sector confirms that seed counterfeiting is a strategic issue; seed counterfeiting can “ruin the reputation and economic prospects of an entire agricultural region or a key national commodity” (International Seed Federation[ISF],2021, p.13).

### **1.1.1 Business threat of counterfeiting**

Threats are events that emanate from the external environment, are out of control, and have impending negative or harmful consequences for the organization resulting in losses (Chattopadhyay, Glick, & Huber, 2001; Jackson & Dutton, 1988; Staw, Sandelands, & Dutton, 1981). The impact of business threats is not only felt in the firm's operating conditions; its total viability is at risk as the severe disruptions undermine survival (Enderwick, 2006). Business threats can derail the attainment of desired goals, heighten secondary costs, cause loss of revenue and shareholder value, and deterioration of brand equity and reputation (Enderwick, 2006). The appropriate response is necessary for dealing with threats to business in fact, well-published collapses point to the failure of the firm to adapt in the face of environmental challenges (Staw et.al., 1981).

Business threats are more likely to influence organizational directions; they are challenging and involve high stakes and urgency (Chattopadhyay et.al., 2001). In responding to threats, organizations will either adjust their internal structure or enhance their position in the environment (Staw et.al., 1981). Chattopadhyay et.al. (2001) suggest that externally directed actions involve extensive amounts of resources and hence could constrain future actions. On the other hand, responses aimed at modifying the internal structure are less risky given that they are within control and are easy to implement. Researchers generally agree that threats result in possible losses and that individual bias and tendencies on the part of managers will determine response (Chattopadhyay et al., 2001; Jackson & Dutton, 1988; Shimizu, 2007; Staw et.al., 1981). However, how organizations respond to threats is subject to debate. On one side of the divide, researchers view threats as prospect enhancing, while the other concludes that threats induce rigidity.

Amidst threatening situations, organizations portray rigid behavior that presents as the failure to act differently or do something novel in the face of threats or economic adversity (Shimizu, 2007). Threats trigger changes in information and control processes that cause information restriction, constricted control, and resource conservation. These tendencies result in less varied and inflexible decisions (Staw et.al.,1981). Thus in the event of threats, the well-learned or dominant response based on experience will inhibit the development of the best solutions (Shimizu, 2007). Proponents of prospect theory submit that threats propel the organization to seek riskier solutions that influence the business environment (Saebi, Lien, & Foss, 2017). This risk-taking behavior comes to light when firms explore unknown or uncertain domains, albeit challenging and costly to implement. Moreover, the hefty

deployment of resources does not guarantee a positive return (Lockett, Wiklund, Davidsson, & Girma, 2009).

Numerous changes in processes related to the social, political, and legal have heightened risks and instability faster than firms can deal with (Endres, 2018). Emerging business threats are non-recurrent and change in form; the randomness in which they occur inhibits prediction (Enderwick, 2006). As such, organizations constantly respond to threats more than they can predict. This bias toward threats arises from the awareness that threat cues are less likely to capture management's attention hence the inadvertent under-recognition and over-interpretation of threats. (Jackson & Dutton, 1988).

Global threats from internationalization, Constant introduction of products, and the rise of new industries put pressure on firms. Additionally, Obscured boundaries between conventional sectors, lessening corporation life spans, extensive regularization, and increased technological advancements and accessibility present new threats for firms (Enderwick, 2006). An enduring menace, product counterfeiting, is resurging with growing momentum. This threat involves the deliberate and strategic production or sale of products closely resembling genuine ones (Buratto et al., 2015). Persisting since its inception, this issue is expanding in scale and intensity, posing a significant threat to the survival of businesses.

Two markets for counterfeits exist. In the secondary market, buyers of counterfeit goods are deceived and believe they are purchasing legitimate items. In the primary market, Consumers willingly purchase counterfeit products (OECD & EUIPO, 2016). The seed sector has not been immune to the menace of counterfeits, and the extent of counterfeit

seeds fluctuates in correspondence with economic development. In developing countries, up to 60% of seeds sold are counterfeits compared to 40% in developed countries (Martin, 2019). Counterfeiters target reputable brands; their products attract high demand and higher prices (Mennel et al., 2014) since farmers are willing to pay more to guarantee quality (Gharib, 2018). With technological advancement, counterfeit products have become difficult to spot. Generally, seed fraud goes unreported; perhaps, it does not produce the effects on tax income and public health akin to other forms of counterfeiting (Martin, 2019).

In the context of developing countries where this study will focus, counterfeit seeds are most prevalent during planting seasons. According to Gharib (2018), there is a 40% chance of purchasing fake seeds a month before and after planting. Exposure to seed fraud is threefold. One is during seed multiplication, where corrupt growers top up the order with ordinary grain to cover shortfalls in the contract quantity (Monitor Deloitte, 2014). The second exposure is during distribution; agro-dealers use genuine seed packets for fake seeds (Ashour, Gilligan, Hoel, & Karachiwalla, 2018). Where bulk breaking is required, weaknesses in the distribution channel further increase the risk of counterfeits (Karingu, Patrick, & Ngugi, 2013). The most rampant happens outside the value chain; rogue sellers use imitated versions of seed company packaging to deceive buyers (Monitor Deloitte, 2014). Seed counterfeiting has a domino effect which, in addition to discouraging investment, also causes crop failure, low uptake of improved seed, and exacerbates the loss of confidence and trust in the seed sector (ISF, 2021). The Potential loss of livelihood for farmers and families due to poor performance of crops is significant for developing countries where agriculture generates 60% of employment (Martin, 2019).

### **1.1.2 Concept of strategic growth**

Strategic growth anchors on the premise that the business environment has become more volatile and dynamic; markets have become saturated and blurred, and product life cycles are increasingly shortening in the face of intensified competition and rivalry. A strategic perspective is critical to sustaining growth in the face of these challenges (Dagnino, King, & Tienari, 2017; Mom, 2019). It is interesting to note that there is general leniency when defining strategic endeavors. According to Shivakumar (2014), strategic decisions entail a high degree of commitment exemplified by high reversal costs and extensive customization; engagements will be unfit for purpose and ineffective if reversibility is devoid of cost implication (Teece et.al.,1997). Strategic decisions are rare, difficult to duplicate, and risky, they change the scope by revolutionizing the selection of products, markets, services, and activities (Shivakumar, 2014).

Strategic growth involves establishing new markets and matching new opportunities to resource endowment (Lockett et.al., 2009, Coad, 2007). It is a continuous process that requires excellent implementation abilities; it encompasses combining, weighing, and selecting different growth strategies aimed at creating wealth and enhancing the competitive landscape (Mom,2019). Growth is an innate drive of firms and profitability is necessary for continued growth and survival; according to Ansoff (1957 P .113), “to retain its relative position a business must go through continuous growth and change, to improve its position, it must grow and change at least twice as fast.” These changes will be evident in the product mix and how the firm stimulates and responds to competition. Continuous growth requires sustained competitive advantage and the formation of relatively secure bases from which to adapt and expand (Penrose, 2009).



In the pursuit of strategic growth, organization renewal is inevitable. This is because developed routines, processes, and paths provoke myopic tendencies that limit and constrain the ability to find novel ways of operation and resource recombination for growth (Lockett et.al., 2009). The goal is to revamp core competencies and capabilities-wrought in the routines, processes, and strategic alternatives also known as paths (Teece et.al., 1997)-, regenerate new bases for competition, and increase performance and ultimate viability (Mom,2019) so as to build the preparedness necessary to seize growth opportunities (Mom,2019; Saebi et.al., 2017). Renewing the organization is no mean feat; It calls for distortion of ongoing operations and even abandonment of commitments hence expensive and risky (Lockett et.al., 2009; Mom, 2019). It is imperative that Firms develop processes that guide the change to guarantee a high payoff (Teece et.al., 1997).

There are four strategic growth alternatives available to firms; market penetration, market development, product development, and diversification (Ansoff, 1957). Managers implement the growth agenda organically or through acquisition. Organic growth is attractive when firms can develop and integrate new capabilities and resources without the pressure of time (Coad, 2007). On the other hand, acquired growth is most favorable where there is an urgency for new capabilities and resources. Acquired growth is a shortcut to continued growth (Dagnino et.al., 2017); the firm acquires non-path-dependent resources, knowledge, and insights that spur new growth. Nonetheless, a firm's choice of growth mode impacts future growth; resource accumulation of past growth orchestrates opportunities and boundaries to future growth. (Lockett et.al., 2009).

High-growth firms build idiosyncratic resources, dynamic capabilities, and structures that are hard and costly to duplicate and which allow the release of superior products at lower

prices (Mason, Bishop, & Robinson, 2009). What a company can accomplish is not just a function of opportunities faced but also of the resources it can control (Teece et.al., 1997). Firms seeking growth must first enhance dynamic capabilities through developing relevant skills and knowledge, embracing innovation, optimizing external relationships and strategic alliances; this will introduce novelty in resource recombination and use in the attainment growth (Lockett et.al., 2009; Mason et.al., 2009).

### **1.1.3 Overview of the seed industry in Kenya**

The seed industry began to take shape in 1956 when parliament mandated the establishment of the Kenya seed company to produce pasture seeds. Liberalization opened up the Kenyan market to new entrants, including various regulatory bodies and supporting organizations (Context Network, 2016). New entrants contend with significant investment in assets for production capability, processing, packaging, and storage facilities (Kenya Markets Trust[KMT], 2019). The predominance of the informal sector as the source of seed suggests untapped prospects which presents an opportunity for investment in new seed varieties.

The seed industry is slow-paced, the process of new variety releases takes a considerable amount of time and investment (MOA,2010) and buyers exhibit rigidity in exploring new seed varieties. For instance, in 2019, the average age of maize variety widely purchased was 19 years (Mabaya et al., 2020). Though the highest returns occur during the planting season, seed available for sale is insufficient. The somewhat rigid supply is made worse by inadequate systems of forecasting demand, insufficient land for seed production, and unfavorable climatic conditions (Context Network, 2016); these supply shortfalls present

an opportunity for counterfeits. Moreover, duplicated efforts and collusion of mandates that characterized the regulatory environment resulted in an inconsistent legal and regulatory framework hence a weakened control environment (KMT, 2019).

#### **1.1.4 Kenya Seed Company**

Kenya Seed Company is a parastatal founded with the core assignment of conducting focused research that will stimulate and facilitate the production of high-yielding certified seeds of good quality that will heighten food sufficiency and promote superior living standards for sustained economic development (MOA, 2010). Success in research and development has yielded over 60 varieties of crop seeds. Despite this growth, the company heavily relies on the maize seed as the principal source of revenue; in 2015, 73% of the group and 87% of the parent company revenues came from maize seed. Future growth is estimated to rise from diversification, the release of new varieties that are fast maturing and disease resistant, investment in the untapped vegetable market, the increased supply of pasture seeds, and efficiency improvements (The Auditor General, 2016).

Before liberalization, KSC enjoyed a monopoly over the seed sector; early dominance in the industry and a significant asset advantage in production capability presented a competitive advantage for the firm (Context Network, 2016). However, substantial investments in the seed industry (Mabaya et al., 2021) and the entry of multinationals have shaken KSC's bases of competitive advantage (Access to seeds, 2020). As a producer of quality seed, the firm is highly reputable, KSC is banking on this goodwill to advance its growth agenda and guarantee success (The Auditor General, 2016). KSC's good reputation has elicited counterfeiting activities seeing that it is the most targeted seed company by

seed counterfeiters (KMT, 2019). Its position in the market and susceptibility to counterfeiting compared to other firms makes it the most appropriate for the study.

## **1.2 Research problem**

Intellectual property is critically important in generating value for firms in competitive markets (OECD & EUIPO, 2016). Intellectual property confers a strategic disposition; the fundamental importance of Intellectual Property insinuates that its infringement is detrimental to the sustainability and ultimate economic viability of firms and economies (Anti-counterfeit authority[ACA], 2020). Despite the interest from the popular press, government agencies, and international bodies, counterfeiting has received unsatisfactory attention in academia; the extant literature has focused on the fast-paced sectors such as fashion, pharmaceuticals, food, and beverages and on the general impacts of counterfeiting on brands and government. The subject of counterfeiting as it relates to strategic growth is unexplored; the impact counterfeiting has on strategic growth remains ambiguous. This study fills this gap in Knowledge.

Various studies have attempted to isolate grounds for counterfeiting; Field experiments by Gharib (2018) revealed that the prevalence of counterfeits does not deter willingness to purchase. Muthiani & Wanjau's (2012) survey of pharmaceutical firms found that consumers buy counterfeit products where price advantages exist. For agro-based products, Karingu et.al (2013) identifies supply chain dynamics, lack of information flow, lax regulations and institutions, and technological advancements as enablers of counterfeiting. Studies in the Luxury sector have focused on the effect on sales and demand and exhibit peculiar results; counterfeits can drive innovation (Qian, 2014), offer low-cost advertising

(Buratto et.al, 2015), and inspire potential consumers (Bekir, El Harbi, & Grolleau, 2011). However, the assumptions that informed these models are restrictive. Other studies like that of Ashour et.al. (2018) have sought to ascertain whether beliefs about counterfeiting depict reality. OECD & EUIPO (2016) tried to map the economic impact, and Stevenson & Busby (2015) explored the strategies of counterfeiters; counterfeiters aim to maximize revenues, reduce enforcement penalties, and prevent the likelihood of detection. Other studies have provided solutions; Monitor Deloitte (2014) proposed focusing on authentication, movement verification, quality assurance, packaging, and channel investment. However, anti-counterfeit strategies are costly (Nosal & Wallace, 2004) and consumers may not accept high product prices occasioned by anti-counterfeiting strategies (Dobbelstein & Pepuere ,2019) this calls for a multi-faceted approach.

The body of research as currently constituted presents a challenge for practice; the seed sector has received little attention. Given the heterogeneous nature of counterfeiting impacts (Qian, 2014) and therefore limited generalizability of results, a detailed contextual analysis is necessary to facilitate the representation of the seed sector. Moreover, the majority of the studies have been empirical; a variation of research method is needed to generate new insights. Through this case study, the much needed in-depth examination and understanding of the phenomena provides additional knowledge on the effect of counterfeits on business growth. The study answered the question; what is perception of managers on the effect of the business counterfeiting on the strategic growth of Kenya Seed Company?

### **1.3 Objective of the Study**

The general objective of the study was to determine the managers' perception of the effect of business counterfeiting on the strategic growth of Kenya Seed Company

### **1.4 Value of the Study**

This study has contributed to the growing literature on strategic growth and the debate on firm responses to business threats. Since actions regarding counterfeiting call for more than one size fits all policy (Bekir et.al., 2011), this study findings benefits policymakers in the seed sector and offers insights on the most appropriate anti-counterfeit strategies to ward off counterfeits and mitigate adverse effects on firms. The proposed recommendations, once implemented, are anticipated to fortify the existing measures, thereby enhancing the effectiveness in combating counterfeiting and achieving greater success.

The insights garnered from this study prove invaluable for KSC management. Recognizing the pivotal role of management in countering counterfeits (Qian, 2014) and the significance of their ability to efficiently coordinate internal and external competencies (Dagnino et.al., 2017), the study has contributed to enhancing and enriching the management's understanding of counterfeiting. Furthermore, it has provided guidance on collaborative strategies to strengthen KSC's operational integrity and resilience against counterfeit threats.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter is structured into two comprehensive sections: the theoretical review and the empirical review. The theoretical review comprises an analysis of pertinent theories related to the study and their applicability. This is followed by the conceptualization of the study and finally the empirical examination. The empirical review meticulously examines relevant research, focusing on the impacts of counterfeiting on business performance. This includes an exploration of the outcomes on returns, influenced by factors such as firm reputation (including brand equity), sales, and costs. Additionally, it delves into the repercussions on innovation and investment. Together, these sections establish the foundational framework and provide substantiation for the ensuing investigation.

### **2.2 Theoretical review**

This section describes the assumptions of the selected theories and their relevance to the study. Resource-based view theory is key seeing that resources are critical in strategy execution hence, this theory sheds light on the existence of counterfeits and the kind of resources needed to fight them. The five forces of competitive advantage theory confirm that counterfeiting threatens business viability and illuminates the kind of impact.

#### **2.2.1 Resource base view**

The overarching idea is that resources are pivotal to firm accomplishments; what a firm can achieve depends on the kind of resources it can master. Contributors of this theory are Edith T Penrose, Birger wernerfelt, and Jay barney. The firm has resources that produce

services through deployment, combination, and allocation (Kor, Mahoney, Siemsen, & Tan, 2016; Penrose, 2009;). These services are the drivers of heterogeneity, and the innovative and efficient ways of resource exploitation are the source of uniqueness (Penrose, 2009). The theory builds on the assumption that firms in an industry possess heterogeneous and immobile resources. With these assumptions in place, superior returns for firms emanate from valuable, rare, imperfectly imitable, and non-substitutable resources (Barney, 1991).

Resources are valuable when the strategies they aid to conceive and implement improve efficiency and effectiveness. Rare resources have to be valuable and exclusive to a firm; they are not obtainable or copyable by rivals, neither do they have other strategically equivalent resources (Barney, 1991), or else returns will be depressed. Firm attributes, processes, capabilities, and assets are regarded as resources only if they enable the conception and implementation of strategies; firms can increase performance only when conceived strategies exploit opportunities and neutralize threats (Barney, 1991). In the context of counterfeits, applying the resource base view suggests that potential producers facing resource barriers (Stevenson & Busby, 2015) resort to illegal profiteering. A Firm obtains resources through production or purchase. Generally, firms are stuck with what they have; the complexity inherent in business developments means that firms build new competencies slowly. Certain aspects of business are not readily tradable; firms gain little from purchased resources (Teece et.al, 1997).

Counterfeiters depend on two valuable resources; a trademark and a good reputation. A good reputation is valuable; it enables the firm to achieve different goals in the market (Teece et.al., 1997). Good reputations are seldom an outcome of serendipity; they proceed



from well-calculated moves by firms to guarantee high-performing quality products giving rise to trademarks. Trademarks and firm reputations are organizational capital resources linked to formal and informal exchanges between a firm and its environment. A positive reputation derives from historical settings that are hard to duplicate; casual social interactions that boost reputation are complex and thus hard to imitate (Barney, 1991). In responding to counterfeits, a firm may have to enhance its resource base to hamper imitation (Stevenson & Busby, 2015).

### **2.2.2 Five forces of competitive advantage**

Michael Porter established this theory in his seminal work of 1979; how competitive forces shape strategy. His systems of ideas provide a structured way of accessing how competitive forces in an industry operate and their impact on profitability (Teece et.al, 1997). According to Porter (1979), firms in the industry contend not only with threats from the established combatants but buyers, suppliers, new entrants, and substitute products. The collective strength or weakness of the forces governs performance. The assumptions of Porter (1979) on substitutes apply to the study. Literature on counterfeiting proposes that where there are price advantages, counterfeit products are substitutes for genuine products (Buratto et.al, 2015; Muthiani & Wanjau, 2012). Porter submits that industry developments that cause performance improvements and price reductions are drivers for substitution. Indeed, advancements in technology have enabled the production of high-quality imitations that are cheaper and near copies of originals (Stevenson & Busby, 2015). Counterfeits are an intentional and calculated reproduction of authentic products (Buratto et.al., 2015) that steal demand from genuine products (Qian, 2014) and produce

substitution effects crowding out genuine ones from the market (Akerlof, 1970; ACA, 2020). Although buyers may purchase counterfeits with full knowledge, many are oblivious of the deception and unknowingly substitute genuine products for counterfeits. Porter (1979) suggests that, like substitutes, counterfeits place a ceiling on prices a firm can charge, lower returns, and reduce the bonanza an industry can reap during the boom. These incidences of substitution limit the potential for profitability and expansion (Porter, 1979). Counterfeits are formidable foes and a threat to the growth and sustainability of firms and industries.

### **2.3 Counterfeiting and strategic growth.**

The literature addressing counterfeiting is notably limited, primarily due to the covert nature of counterfeit operations, which hinders the availability of comprehensive data (Staake, Thiesse, & Fleisch, 2009). In the realm of growth literature, a noticeable gap exists between how growth is perceived by practitioners and the conceptualizations presented by scholars, resulting in a diminished level of relevance (Achtenhagen, Naldi, & Melin, 2010). This disconnection has guided the selection of the Ansoff strategic growth model, renowned for its practical applicability. Strategic growth, within the context of this study, entails the creation of new markets and the alignment of emerging opportunities with existing resource capabilities (Lockett et al., 2009). To articulate understanding, the study conceptualizes strategic growth as a multifaceted construct, encompassing market penetration, product development, market development, and diversification. This section endeavors to provide a comprehensive four-dimensional breakdown of the intricate relationship between strategic growth and the pervasive challenge of counterfeiting.

Customers are the leading source of strategic growth opportunities since firms' Products have missions to accomplish (Ansoff, 1957); they have definite jobs to perform in meeting consumers' needs, hence, perceptions of product quality and authenticity play a crucial role in influencing the firm's reputation and consequently product adoption (Ashour et al.,2018). Drawing on studies by Stevenson and Busby (2015) and Teece et al. (1997), the firm's reputational assets serve as instrumental components enabling the achievement of diverse objectives in the market. From a literature, diminished demand is identified as a consequence of induced substitution effects stemming from counterfeiting (Bekir et al, 2011; Qian, 2014); eventually, illegal products drive honest dealings from the market (ACA, 2020; Akerlof, 1970). The resultant reputational damage, coupled with the substitution effects, collectively contribute to the erosion of market penetration and impede market development.

Counterfeiting not only poses a threat to established brands but also exerts a profound dampening effect on product development. The encroachment of imitations goes beyond mere economic losses; it substantially undermines the very essence of innovation, as evidenced by its adverse impact on returns (ISF, 2021). The symbiotic relationship between innovation and growth is a cornerstone of business evolution, with each fueling the other in a perpetual cycle. For companies aiming to thrive through product development, the nexus between growth and investment in innovation is irrefutable. Delving into the extensive body of literature on the subject, a consistent theme emerges: counterfeits act as formidable deterrents to both investment and innovation. Scholars (ACA ,2020; Butticiè et al.,2020; Buratto et al.,2015, and Cuntz & Qian ,2020) echo the sentiment that the presence of counterfeit products in the market stifles a brand's willingness and ability to invest in

groundbreaking ideas and technologies. While outliers, like Qian (2014), propose a counterargument suggesting that counterfeits could potentially drive an expansion in the product line, this assertion is met with skepticism. The prevailing view, informed by insights from Lockett et al. (2009), posits that such expansion is improbable due to the myopia and path dependencies inherent in most firms.

The intricacies of firm investment underscore the notion that it is not a random undertaking; rather, it hinges on the anticipation of a positive return and subsequent profitability, as elucidated by Penrose (2009). Furthermore, the temporal aspect of innovation cannot be overlooked. The journey from conceptualizing a novel product idea to navigating the intricacies of manufacturing procedures and establishing operational routines is a formidable challenge laden with both temporal and financial costs, as outlined by Coad (2007). Hence, the detrimental impact of counterfeiting on both innovation and investment strongly implies that counterfeits act as impediments to product development.

The chances of counterfeiting leading to diversification are rather gleam; firms often display a heightened sensitivity to threats as compared to opportunities (Jackson & Dutton, 1988). This vigilance in the face of threats leads to a more conservative and less varied approach to their actions. When a firm identifies a threat, it typically responds by implementing measures such as information restriction, stringent controls, and resource conservation (Shimizu, 2007). While these actions are designed to mitigate risks, they may inadvertently hinder the firm's ability to nurture and explore novel ideas. As a result, when confronted with the challenge of counterfeiting, firms are less likely to consider diversification as a strategic response. Diversification involves substantial costs and requires the acquisition of new skills, techniques, and facilities (Mason et al., 2009). Just

like other threats, it becomes crucial for firms to develop resilience in the face of counterfeiting (Stevenson & Busby, 2015). This implies that, in response to counterfeiting, a firm's initial focus should be on internal development and strengthening its capabilities and defenses before contemplating significant market changes.

## **2.4 Empirical review**

Research on the phenomena of counterfeiting has attracted scholars from different disciplines. The literature is replete with studies on counterfeiting, its effects on companies and regions, the driving forces behind this phenomenon, and the solutions therein. This section will review the literature on the impacts of counterfeiting on performance. Also relevant to this paper are previous works on brand equity and consumer perception because views about possible proceeds, quality, and authenticity are critical for commodity uptake (Ashour et.al.,2018). The implication for performance in the presence of counterfeits is highly debatable; research results show both negative and positive outcomes. Moreover, the criminal nature of counterfeiting (Qian, 2014) is a confounding factor hence the paucity of data; this has become an impediment to exhaustive research. Butticiè et al. (2020) note that empirical estimation of the impact of counterfeiting is challenging.

It is often hypothesized that counterfeits emasculate the reputational messages relied upon by brands (Stevenson & Busby,2015). Since imitations are usually mistaken for genuine ones, negative brand equity drives retaliation through curtailed purchases (Akerlof, 1970). In their study of the impact of counterfeits on consumer-based brand equity for luxury goods, Gabrielli, Grappi, & Baghi (2012) concluded that despite the adverse economic impact counterfeiting also heightened consumer engagement; genuine consumers behave

in favor of their brand. They argue that actual and potential consumers play a pivotal role in defining, conserving, and delivering brand equity and that brands that conceal information about counterfeiting forfeit the chance to involve their allies in fighting counterfeits. Commuri (2009) suggests that customers of premium brands either abandon a brand, disguise all brand cues or forge brand patronage. He argues that losses from existing customers are substantial and warrant attention. In a different stance, Gharib (2018) found that consumers change products and places of purchase, even returning to rudimentary practices to avert risk. Likewise, Ashour et.al. (2018), using a baseline survey coupled with lab tests, found that consumers accurately discern counterfeiting and stay out of a market proliferated by counterfeits; these outcomes impede firm performance.

Other studies have sought to define the impact on earnings. Qian (2014), utilizing data from Chinese shoe brands in different quality tiers and life stages through field and lab experiments, observed that high-fashion products exhibited positive sales, especially for less famous brands. Perhaps as Buratto et.al. (2015) theorizes, imitations are promotional devices that help reduce advertising costs; the purchase of a counterfeit produces an aspiration for the genuine one (Bekir et.al, 2011). Conversely, the lower quality tiers lost sales to counterfeits through substitution (Qian, 2014). Guided by custom seizures in detecting companies that had experienced counterfeiting, Cuntz & Qian (2020) obtained data on firm-level sales performance for different products and industries; the periods after counterfeiting recorded a general decline in sales for most products save for; metals, machinery, electrical equipment, tools, and vehicles. For digital companies, Buttice et al. (2020) reported a decline on revenue of counterfeited firms though not statistically significant.

According to Cuntz & Qian (2020), the most significant impact is on profit; the decrease in operative profit due to additional costs is outstanding. Anti-counterfeiting strategies are expensive (Nosal & Wallace, 2004); indirect costs from changing design, verification, law enforcement, and litigation are colossal. Further, anti-counterfeit measures warrant price increases unacceptable to consumers (Dobbelstein & Pepuere, 2019). Low firm performance stems from price reductions, additional costs, substitution effect, and ensuing reputational damage that depresses demand and lower sales.

Research on the impact of counterfeits on investment and innovation portrays conflicting results. Cuntz & Qian, (2020) used research and development expenditure to measure investment; R&D expenditure decreased for some firms and increased for others. In their attempt to explain the positive results, they note that the entry of counterfeits makes markets appear more competitive in the short term eliciting more investment. Equally, Buttice et al. (2020) found that for companies that had experienced counterfeiting, the number of patents remained the same signifying stifled investment. Generally, agents underinvest when they cannot fully enjoy the benefits of their investment (Buratto et.al., 2015; Walters, 2017). Intangible assets are a product of rigorous investment in design, production standards, product development, and marketing efforts (Muthiani & Wanjau, 2012). Their infringement undermines returns and hampers continued investment needed to produce, develop and deliver better quality (ISF, 2021). A baseline survey in the Kenyan market by ACA (2020) revealed a 178% increase in lost investment and that counterfeits accounted for 41% of investment opportunity loss. Buttice et al. (2020) suggest that companies affected by counterfeiting shift towards investment aimed at protecting their advantage, this kind of investment neither favors the farm nor the industry.

Qian (2014) suggests that counterfeiting spurs innovation; he found that for high-end goods, the advertisement effects outweigh the substitution effects resulting in a net gain. Counterfeited firms enhanced the quality of their product as evidenced by products clustering around high-end products. Nonetheless, his views are contentious. Butticiè et al. (2020) who measured innovation by intangible assets, trademarks, and patents, noted that trademarks increased while patents remained the same. Arguably, while product innovation in response to counterfeits produces product variety, affected firms only focus on easy to see non-functional attributes which are not welfare-enhancing. However, causality probably moves in the other direction; the copious effort exhibited by Producers in protecting trademarks is akin to counterfeiters devoting productive effort to unproductive uses (Nosal & Wallace, 2004).

The literature extensively covers counterfeiting, with a predominant focus on money, luxury products, and pharmaceuticals. Previous research primarily concentrates on the impact on a singular aspect of firms, mainly sales. Consequently, this emphasizes the necessity for a comprehensive and systematic study, particularly one centered on a holistic aspect such as strategic growth. However, there is acknowledgment that occurrences and effects of counterfeiting vary across geographical regions, product types, growth stages, and product tiers (Akerlof ,1970; ISF,2021; Qian ,2014; Walters,2017) some of the theoretical underpinnings are restrictive and hinder generalization



## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter is a summary of the procedures that were applied in the study. The ultimate goal of the study was to determine the impact counterfeits have had on strategic growth; the chapter outlines the methods and techniques involved in answering the research question and the rationale behind them. First is the narrative of the research design employed, then the method for data collection, and finally, the techniques for data analysis.

### **3.2 Research design**

A research design is a blueprint for Gathering, measuring, and analysis of data and encompasses all the decisions concerning what, where, when, and how much; it is the arrangement of the conditions for data collection and analysis that ensures relevance to the research purpose as well as reasonableness in procedure (Kothari, 2004). The research design helped to provide structure and direction to the research. The study sought to answer the question “what is perception of managers on the effect of the business counterfeiting on the strategic growth of Kenya Seed Company?”. The research adopted a descriptive approach, leveraging its inherent capacity to delve into depth. Descriptive research, known for offering a comprehensive portrayal with a narrative of facts, characteristics of individuals or groups, and the surrounding context, allowed the study to achieve thorough insights. This method is renowned for facilitating the discovery of associations among variables, as highlighted by DeCarlo (2018)

The case study design emerged as the most practical choice for attaining the desired depth in the research. This approach not only fulfilled the objective of comprehensive exploration

but also remained in alignment with the imposed time and cost constraints. A case study involves a careful and complete observation of a social unit; it is a method that emphasizes depth rather than breadth. Case studies deepen perception, generate clear insights, and locate the factors accounting for patterns as an integrated totality (Kothari, 2004). Even though case studies are heavily qualitative, the role of quantitative data was indispensable; a mixed method was necessary to answer the research question effectively. According to DeCarlo (2018), researchers should be mindful of sequence and emphasis when employing mixed methods. In line with this recommendation, the study initiated with the collection of qualitative data, followed by the integration of quantitative data.

### **3.3 Data collection**

The data for the study originated from both secondary and primary sources. The researcher gathered Primary data through 9 semi-structured personal interviews with open-ended questions defining areas of reconnaissance that guided the scope and type of data collected from the company records. The secondary data utilized in the study comprised both qualitative and quantitative information and included company internal data mainly financial reports, product catalogues and strategic plan, and other industry reports that emerged from the qualitative method. Secondary data was collected from company website and by direct request where not publicly available; the goal was to achieve complementarity and corroboration.

The researcher maintained written recordings of Participant responses as well as field notes and journals. The participants in the study were the senior management directly involved in the Kenyan operations. Senior Managers were best suited since we assume they have a

profound understanding of the organization and the external business and possess tacit knowledge and experience. As Brikci & Green (2007) noted, participants are selected because they are likely to generate useful data; the technical information needed may not be available to junior employees.

### **3.4 Data analysis**

Data analysis aimed to reduce data to a manageable size, develop summaries, identify patterns, and apply statistical techniques to aid interpretation (Kothari, 2004). The study generated quantitative and qualitative data therefore data analysis encompassed qualitative and quantitative methods. Quantitative data was summarized and analyzed using descriptive statistics and results tabulated and presented in charts and graphs. Thematic analysis was most suitable for qualitative data; the goal was to identify recurring themes accurately, group them into relevant categories, and describe the patterns and relationships to make meaningful conclusions (Brikci & Green, 2007).

Patterns are discerned within participants' stories and interpretations. The researcher initiated the process by transcribing interview responses and reviewing them to identify recurring themes. This analysis was partly guided by the existing literature and aimed to categorize responses into a limited number of thematic patterns. The discussion on the impact of counterfeiting on strategic growth are structured around the four dimensions of strategic growth: Market penetration, product development, market development, and diversification.

## **CHAPTER FOUR:DATA ANALYSIS, RESULTS AND DISCUSSION**

### **4.0 Introduction**

This chapter explores the outcomes, analysis, and discussion derived from an extensive investigation into managers' perception of the effect of business counterfeiting on strategic growth. Focused on unraveling the complex challenge posed by counterfeit seeds particularly for Kenya Seed company, the study employed a case study research design. It examined various dimensions of counterfeit seeds, the strategies employed by Kenya Seed to mitigate their adverse effects, and assessed the repercussions on the company's strategic growth. The chapter presents findings through a thorough thematic analysis and engages in thoughtful discussion to enhance understanding of the challenges associated with counterfeit seeds.

The following sections offer a systematic presentation organized around key themes: first, the study delves into the Dynamics of Counterfeiting of Kenya Seed Products. Next, the researcher examines anti-counterfeit strategies at KSC and finally, a scrutiny of the Effect of counterfeiting on the strategic growth of KCS. The ensuing discussion section synthesizes these results, placing them within the broader context of business threats and strategic growth.

## **4.1 Respondent's Profile**

The participants in this study comprised senior management personnel from the Kenya Seed Company, actively engaged in overseeing Kenyan operations and stationed at the corporate headquarters in Kitale. The participants, categorized according to the departments they oversee, have commendable qualifications in their areas of expertise, coupled with extensive tenures within the organization.

Their prolonged experience has endowed them with valuable tacit knowledge pertaining to the operations of the company and the broader business landscape, thereby lending considerable credibility to their responses. The featured departments included seed production, planning and strategy, sales and marketing, finance, ICT, quality assurance, procurement, legal affairs, and security.

## **4.2 Examining the dynamics of counterfeiting of KSC products**

This section furnishes comprehensive findings on the historical aspects of counterfeiting related to KSC seed. It delves into the underlying causes that drive counterfeiting activities and explains the factors making KSC products susceptible to counterfeiting. Subsequently, the narrative covers the exposure to counterfeit seeds and the organization of this illicit trade in terms of production and distribution.

### **4.2.1 Drivers of counterfeiting**

The investigation determined that counterfeiting primarily occurs during the planting season, when the demand for popular seed varieties surpasses the available supply creating shortages. Counterfeiters, cognizant of this shortage, exploit the situation by selling

counterfeit seeds to capitalize on the increased demand. Further probing revealed that the inability of KSC to meet the demand for certified seeds is attributed to various factors, including unpredictable climate conditions, extensive land subdivisions, growers' diversifying to other crops, and the emergence of new crop diseases and that KSC is actively pursuing an expansion of seed production into Tanzania. This strategic shift is anticipated to enhance overall production capacity, addressing the current challenges faced by the company.

The majority of respondents affirmed that counterfeiting has been a longstanding issue for the organization, with incidents dating back to as early as 1998. The prevalence of counterfeiting has notably increased over the years, especially with the rising demand for certified seeds. Counterfeiters bank on the lack of customer knowledge in distinguishing genuine seeds and the allure of lower prices; the new markets are most affected.

The research findings indicate a discernible decline in counterfeiting activities following the implementation of anti-counterfeit strategies. These initiatives convey a strong message to counterfeiters, signifying KSC's unwavering commitment to decisive action, including the impoundment of counterfeit seeds and those responsible. Notably, one respondent expressed that counterfeiters now "fear" KSC, showcasing the efficacy of the implemented strategies in deterring such illicit activities.

One respondent imposing this noted that "We are always summoned whenever there are incidences of counterfeit seed even when it is not our seed. Everybody thinks of Kenya seed company because we are more sensitive to counterfeiting". Further, another respondent recounted; "the trend of fake seeds is coming down compared to earlier years.

We are working together with other agencies who assist in surveillance and inspection to bring down the prevalence rates. Our customers are now knowledgeable through the KHEPHIS stickers”. Further, the respondent revealed that “it has made our customers understand us better. People try to understand the difference; In 2019 when we had rampant counterfeiting those who were affected by counterfeits were able to know the difference”.

Based on the responses, counterfeiters strategically focus on varieties with high demand, primarily targeting maize seeds where the company has positioned itself as a quality producer. The maize seed products, comprising at least four varieties per ecological zone, not only provide customers with a diverse range of choices but are also recognized for their high performance at competitive prices compared to other brands. When asked about the extent of counterfeiting for KSC products, one respondent noted “nobody wants to counterfeit a brand that is not known. Our seeds are known for their quality so it is easier to counterfeit compared to other seed companies”. In a similar stance another recounted “our seeds are most preferred because of the high quality, this makes them the target of counterfeiters. Other companies are not stringent in their approach; counterfeiters target products that are fast moving”.

The findings imply that while consumer loyalty is commonly seen as a protective shield for companies, it can paradoxically become an opportunity for counterfeiters. The usual benefits of strong brand loyalty and repeat purchases can unintentionally open avenues for counterfeiters to take advantage. This vulnerability arises particularly when the company struggles to meet the high demand, creating a void that counterfeiters may exploit by introducing fake seeds into the market.

#### **4.2.2 Exposure to counterfeit seed**

The study revealed that the majority of counterfeiting occurs within the domain of agro-dealers and stockists often involving unregistered entities who either reuse valid seed packets, create imitations, or obtain genuine ones from KSC suppliers. It was noted that registered agro-dealers undergo a rigorous recruitment process by both KSC and the regulatory body KHEPHIS and that selling counterfeit seeds leads to immediate deregistration, barring the agro-dealer from selling seeds in Kenya. This clarifies why most counterfeiting incidents occur among unregistered dealers; they have less at stake.

While counterfeiting at the grower level is considered one potential exposure, the study conclusively eliminated this possibility. At the grower level, KSC has enforced stringent measures; the established processes are meticulously designed to be foolproof, ensuring a robust defense against any potential infiltration of counterfeit seeds. Response from the seed production department indicated that growers undergo rigorous evaluation to ensure compliance with the necessary standards. KSC's experts meticulously oversee the entire plant life, ensuring proper development with the correct morphological characteristics. The company employs registered transporters subject to strict penalties for any misconduct. The measures are implemented with precision and effectiveness, creating a stringent barrier that minimizes and eliminates the risk of unauthorized or fraudulent seed entry through the grower network.



### **4.2.3 Production and distribution**

As regards operations of counterfeiters the study found that most counterfeit operations are decentralized, involving the production of counterfeit seed in one area and subsequent transportation for sale in distant regions, particularly in areas with low detection rates, such as the rural regions of Mulot, Bomet, and Kiambu. Counterfeiters strategically target rural areas where their operations are predominantly labor-intensive, characterized by straightforward manual processes.

From the responses, the researcher gathered that counterfeiters exhibit heightened prevalence in budding markets recently penetrated by KSC, where the embrace of commodities is in its formative stages, and clientele, yet to accrue substantial experiential knowledge, grapples with a deficit in essential information to cultivate brand equity. Conversely, in KSC's older markets in the Rift Valley and Trans Nzoia counties consumers exhibit heightened discernment and comprehensive product knowledge, actively discerning product attributes. Furthermore, they robustly engage in the identification and pursuit of counterfeit practices. The protracted presence of KSC in these regions has engendered a robust brand patronage, culminating in enduring consumer loyalty.

Despite counterfeiting KSC has retained its customers as elucidated by this response; “Kenya seed has been here for long so anytime a farmer gets bad seed they know that they need to verify. Our seed is so unique compared to others. A bag full of maize weighs more. The persistence in the market and the commitment to quality gives us an upper hand. Our performance is quite remarkable compared to others”. Responses revealed that counterfeiters employ diverse strategies to infiltrate legitimate supply chains, one respondent noted that low-germinating seeds which are disposed by KSC through sale to

millers and are sometimes repackaged for resale. Another method involves theft with the collusion of employees, where stolen seeds are mixed with authentic KSC seeds and resold to unsuspecting customers. In a more sophisticated approach, counterfeiters integrate with genuine supply chains, collaborating with esteemed agro-distributors to sell counterfeit seeds, thereby reducing the risk of detection.

### **4.3 Anti-counterfeit strategy at Kenya Seed company**

There was significant consensus among respondents regarding the anti-counterfeit strategies at KSC, with all participants identifying and acknowledging the same set of strategies. KSC has adopted the offensive strategy which involves a proactive identification and pursuit of counterfeiters, with collaborative efforts between the company, enforcement agencies, and relevant officials. This strategy necessitates innovative features for detection and robust surveillance of distribution channels and is in line with its market development orientation; actively capitalizing on emerging market opportunities and often serving as a catalyst for industry change.

To reinforce its offensive strategy, KSC has forged a comprehensive partnership with crucial regulatory and law enforcement agencies, such as the ACA, KHEPHIS, the Kenya Police, and the media. As a parastatal, KSC has leveraged its institutional position to secure essential support in pursuing counterfeiters. One respondent recounted: “Kenya seed being a parastatal gives us an upper hand and better engagement. These other seed companies do not have an upper hand”. Another recounted: “We cover a large area meaning, if anyone sees a fake, they will report. We are a government parastatal so getting security machinery

is fast enough and even within the institution we have officers; we also have a strong human resource capability”

Asserting value of its position as a parastatal one respondent noted; “Our partnership with the regulatory body has given us an upper hand. We have an elaborate distribution network that enabled us to reach most ecological zones; our team is able to follow up and our branches are spread all over East Africa to register our presence and address key issues. We have a strong brand that has enables us maintain our customers. We also have a relationship with farmers”. Respondents cited a strong brand, robust human resource capacity, intricate distribution network, and loyal customer relationships as key capabilities enhancing the effectiveness of KSC's anti-counterfeit strategy, especially in the oldest markets. From the responses, three overarching categories of activities used by KSC to operationalize this strategic approach emerge. These are outlined below.

#### **4.3.1 Activities that enhance consumer awareness and education**

KSC has employed a robust communication system to disseminate pertinent information to farmers. This information encompasses details on seed availability, performance characteristics of products, and the range of available varieties. The company actively participates in radio programs dedicated to farmer education, facilitating the dissemination of essential knowledge among farmers. Recognizing that informed individuals are better equipped to distinguish authentic products from counterfeits, KSC prioritizes educational initiatives.

Moreover, KSC engages in road shows as part of its communication strategy. These events involve traversing different cities or regions, where temporary displays or stages are set up

to interact with a diverse audience. Additionally, KSC utilizes demonstration plots, field days, and agricultural shows as avenues to keep both its clientele and the broader public informed. These platforms serve a dual purpose; they not only educate customers about KSC's products but also act as channels to alert them about the presence of counterfeit seeds.

#### **4.3.2 Activities towards securing legitimate distribution channels.**

Kenya Seed Company has established a robust and vigilant distribution network comprising regional offices, registered agents, and stockists. KSC's marketers periodically monitor distribution channels, and its technical staff conducts post-certification checks to assess seed viability. The company has implemented stringent deterrent measures, including revoking licenses, to dissuade potential offenders and reinforce its commitment to seed integrity in the Kenyan market.

The security team at KSC engage in constant surveillance, signaling a proactive stance against counterfeit activities and fostering an environment where counterfeiters risk apprehension. One respondent noted that the recent confiscation of counterfeit seeds was not attributed to KSC seeds this attests to the effectiveness of its measures. Another respondent noted that key informants strategically placed throughout the country, in collaboration with customers, play a pivotal role in apprehending offenders.

#### **4.3.3. Activities for verification**

KSC pioneered the implementation of an anti-counterfeit system in the seed industry, positioning itself as a market leader. In response to the significant impact of counterfeit activities, KSC proactively adopted an e-verification system. This system, aimed at

empowering consumers to verify the authenticity of seeds, was later integrated into the regulatory framework of KEPHIS. Farmers must scratch these labels and send the revealed number to a designated system to confirm the seed's authenticity. One respondent noted: “Kenya seed affected how KHEPHIS operates. Kenya seed bought an anti-counterfeit system to facilitate verification of our products because we were suffering. KHEPHIS was not doing anything, it later took up the system which it not operates but they got it from us, now we must align with KHEPHIS”.

However, majority of respondents registered their dismay over use of the ant-counterfeit system noting that “farmers do not scratch the labels”. Additionally, the researcher encountered a seed packet with an intact seed sticker despite visible tampering revealing a potential loophole in the system. While KHEPHIS stickers act as a signaling tool, indicating a regulated environment and potential consequences for perpetrators, they are not foolproof. KSC lacks access to the output of the e-verification system, which is under the control of KHEPHIS. This situation represents a missed opportunity for KSC to utilize the data to its advantage. As a result, the company is unable to obtain feedback on the effectiveness of the system, despite its significant cost.

All respondents unanimously replied in the negative when queried about whether the company maintains a database for counterfeiting activities. One noted “it is not available because it is regulated by KHEPHIS and incidences are reported by KHEPHIS”. Another replied that “the database is held by the industry, they provide consultancy first about the seed market and on individual seed company needs”. When asked if the company had utilized consultancy services for research, the response indicated that the company has never conducted any research.

## **4.4 Effect of counterfeiting on the strategic growth of Kenya seed company**

This section aims to explain how counterfeit seeds affect KSC's strategic growth. The discussion revolves around the four growth areas: market penetration, market development, product development, and diversification. The researcher found that KSC's market delineation is organized around the historical division of the country into eight provinces. The company has traditionally held a prominent position in the Rift Valley, Western, and Nyanza regions, collectively referred to as the old or established markets in this study. Notably, recent advancements have enabled KSC to expand its reach into the Eastern, Central, and Coastal regions, these are referred to as emerging or newer markets

### **4.4.1 Market penetration**

The primary goal of market penetration is to sell more of the existing offerings to the current customer base or attract new customers within the same market. To elucidate the impact of counterfeits on market penetration, the study integrated insights from the literature review specifically outlining how counterfeits impact market penetration. This encompassed potential price hikes due to anti-counterfeit measures, rendering the product costly, and the repercussions on demand arising from reputational damage, prompting customers to forsake the brand, and the substitution effect, wherein customers might opt for counterfeit alternatives.

#### **4.4.1.1 Effects to demand due to reputational damage and substitution**

Counterfeits have undeniably inflicted reputational harm, particularly in emerging markets. While most respondents agreed that counterfeits have caused reputational damage, it was evident that impacts were adverse mostly in the emerging markets. Customers in these markets display a lack of vigilance and knowledge about the requisite seed varieties, with those who are informed opting for alternatives from different seed companies “When asked whether counterfeits have affected KSC reputation one respondent noted “yes it does affect. When Farmers buy seeds only to realize they do not perform as much as they should, this raises concerns and disputes regarding the genuineness of our products”.

Another respondent noted “the effect is bad. Rift valley and western regions are sharp perhaps this is because maize is their main cash crop. Central and eastern lack awareness. The damage is serious in other regions as a result loyalty drops and revenues drops through lost sales”. The impact of counterfeits on demand exhibits a short-term effect in the more established markets, while in the recent markets in Kenya, the repercussions have endured. In the mature markets, the demand for certified seed consistently rises, demonstrated by heightened consumption. In emerging markets, demand has diminished due to the substitution effects of counterfeits, fueled by both ignorance and a preference for lower prices.

The attraction to more affordable counterfeits, combined with a limited understanding of the advantages of certified seeds, has created favorable conditions for counterfeiters in these markets. Another respondent, when asked about the impact of counterfeit seeds on the adoption of certified seeds, remarked: “say you are trying to penetrate the market with

farmer saved seeds proliferated with counterfeits, market penetration becomes difficult”. Providing insight into potential reasons for the success of counterfeits in such markets, he observed “they target a market you do not easily detect and where there is no agent or stockists, they take over the market”. Another noted “The demand for certified seed has gone up in the region (rift valley). Kenya seed has maintained the market share; other seed companies are coming up but demand has increased. Another recounted “Over the years, we have been leading for example last year the uptake was so huge we exhausted our stocks. There was so much demand”

Pointing to substitution effect in the newer markets a respondent remarked “We have a problem, people want to buy cheap seeds, in fact one time we went to arrest one seller only to be told by residents why are you arresting this gentleman yet he was selling us seed at a cheaper price”. Furthermore, reputational damage has played a role in steering farmers towards alternative products, this is highlighted by all respondents. One noted that : “when fake seeds enter they say these are seeds from Kenya seed company so they opt for other Companies, this reduces our sales turnover. It is hard to convince them; some cases end up in court”.

#### **4.4.3.2 Price increases**

The responses clearly indicate that the likelihood of increased product costs due to anti-counterfeit measures is nonexistent; KSC has refrained from raising prices despite the substantial costs associated with anti-counterfeiting efforts. One responded affirming this replied “Prices are regulated. We have a standard price for our seeds. Prices are carped to help our farmers. Our seeds are cheaper than our competitors. Another reiterating the same



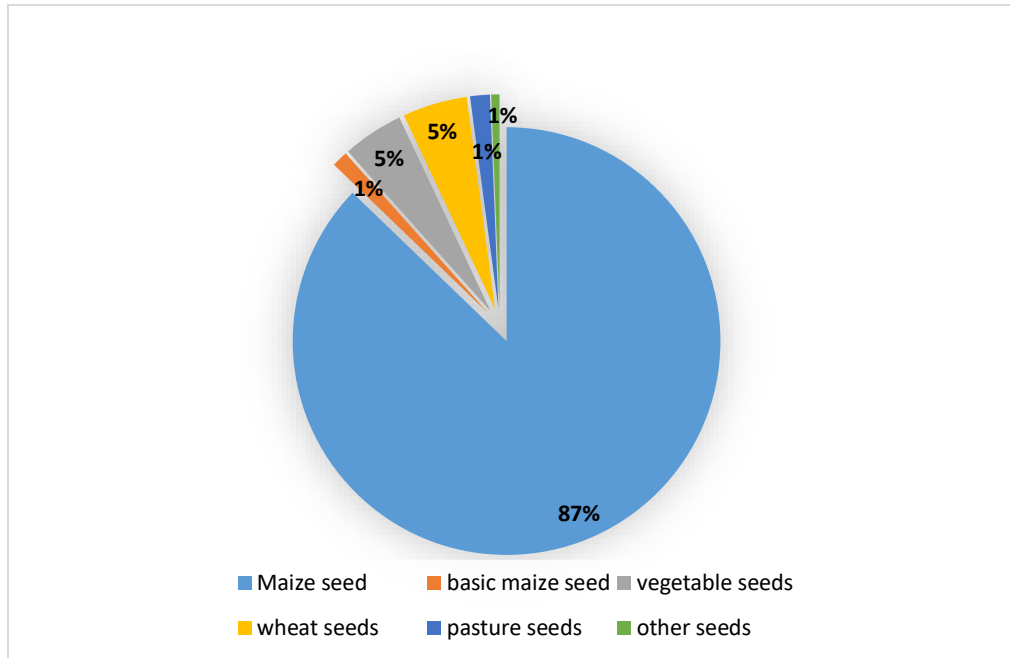
noted “Our price is regulated to cushion the farmers”. KSC’s strategic approach involves swift and comprehensive responses to counterfeiting incidents, coupled with an assertive consumer education initiative. This proactive stance has proven highly effective, especially in established markets where brand loyalty is robust.

#### **4.4.2 Market development**

The investigation uncovered that this is the least pursued growth avenue at Kenya seed. Market development, in a corporate context, involves a strategic approach where a company seeks to extend its reach by entering new market segments with existing products or services. This often entails adopting new uses or applications for current products. The study uncovered that KSC has aligned itself with the latest government initiative to boost production of edible oil in Kenya. In line with this move, KSC is actively promoting sunflower seeds to stimulate demand.

The study findings indicate no evidence of effects on market development. Additionally, it emerged from respondent interviews that counterfeiting is a prominent issue, particularly in maize seeds. It is evident from the interviews that counterfeiters focus on products with high demand. However, company records indicate that sunflower has a very low contribution to revenue (less than 1% of total revenue), indicating low demand this suggests a lower likelihood of widespread counterfeiting for sunflower products. Figure 4.1 illustrates the revenue contributions of different seeds, with sunflower categorized under "other seeds."

**Figure 4.1 Revenue contribution of Various Seeds**



Revenue contribution of various seeds in 2019, adapted from Financial statements of Kenya Seed company and its subsidiaries for the year ended 30th June 2021 by the auditor general (2021)

While potential adverse effects on market development may arise in later markets where KSC's reputation has been most affected, sunflower crops have shown better performance in the highlands. These highland regions form KSC's strongest markets, particularly the western regions; these areas are noted to be less affected by counterfeits.

#### **4.4.3 Product development**

For the purposes of this study product development is the process of creating and introducing new or improved products to meet the evolving needs and preferences of customers. We theorized, drawing insights from a thorough literature review, that counterfeits either exert influence on the introduction of new products or curtail the

capacity to develop of new ones (Innovation). This hindered innovation originates from adverse effects on revenue and profitability.

#### **4.4.3.1 Counterfeits seeds influence the introduction of new products**

The study findings at KSC contradict this notion, clearly indicating that counterfeits have no influence on the expansion of KSC's product line. All respondents answered negatively when questioned about whether counterfeits had an impact on the introduction of new products indicating that new products are exclusively initiated through R&D, driven by farmers' concerns and the need to enhance product performance. "Research is guided by the search for new varieties which are meant to address our customers' challenges, research is pegged on solving a problem. One of the drivers is to produce disease resistance varieties for example the MLN disease. Another driver is to increase yield per unit seeing that firms in the highlands are getting smaller. We also aim to produce varieties that do well in the shorter period".

KSC's research focuses on producing ecology-specific seeds resistant to diverse climate conditions, ensuring better yields, and resistance to weeds and diseases. Company records also revealed that R&D also focusses on testing the right complementary products to promote plant health. Logically, keeping up with counterfeiters is unattainable due to the extended and costly varietal registration and release process; implementing innovation to counter counterfeits would necessitate rapid turnover of varieties in sync with incidents of counterfeiting.

#### **4.4.3.2 Counterfeit seeds curtail the capacity to develop of new products**

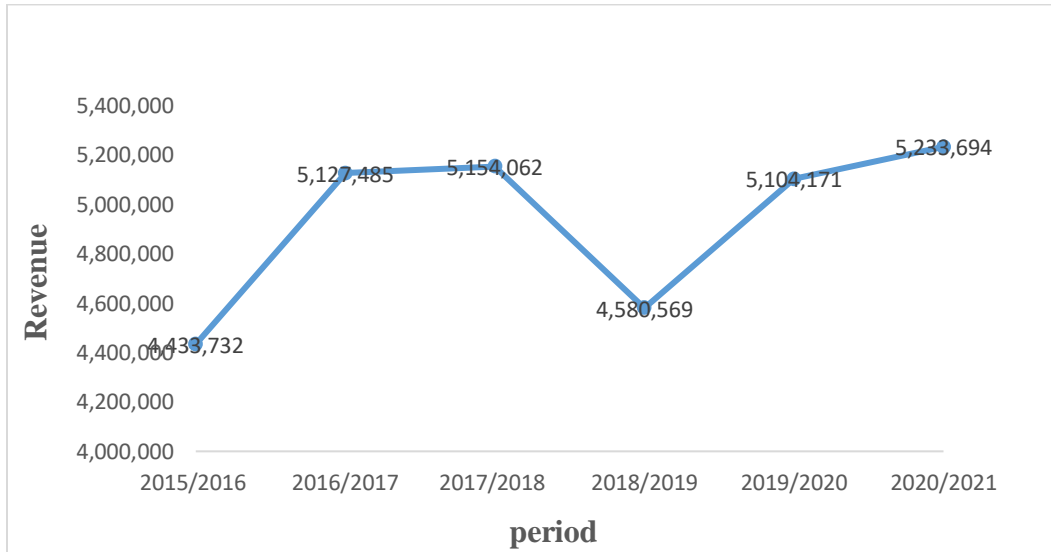
Findings related to revenue and profitability indicate that the principal impact of counterfeit seeds on KSC's product development could be a potential constraint of innovation. Respondents exhibited convergence in the area of counterfeiting costs. A review of financial accounts showed that since 2015, the costs associated with the anti-counterfeit system had increased by 361%. Notably, this figure excludes the costs associated with anti-counterfeit operational activities, such as enhancing Consumer Awareness and Education, securing legitimate distribution channels, and Verification Activities.

Suggesting that high cost of stickers could be because seeds have to be packaged into smaller packets one respondent remarked “the security team have to gather data through intelligence reports which means additional travelling and security costs. There is also the cost of using the KEPHIS stickers; it costs the company ksh 40 million every year. Production stands at roughly 30m kilos a year; these are packaged into 1kg,2kg,10kg, and 25kg packets”. Another recounted that “we never used to put the label, now we are applying the label, we have also had to invest in surveillance programs which come at a cost. we have to put special features on the packaging which also come at a cost”

The revenue impact was notably severe prior to the implementation of the anti-counterfeit system; the firm suffered a 20% loss in profits in 2015. According to interviews, 2019 saw the highest levels of counterfeiting; company revenue and profit statistics show a 16.17% decrease in the quantity of maize sold and an 11% decrease in revenue. The 2019 drop in revenue was lower than the effect in 2015, highlighting the mitigating effect of the anti-

counterfeit strategy, which was implemented in 2015. Figure 4.2 illustrates the significant the dip in company revenue in 2019.

**Figure 4.2 Revenue Trend**



KSC revenue from 2015 to 2021, adapted from Strategic plan 2018/19 -2022/23 by Kenya Seed Company (2021).

The trend in revenue since the introduction of the anti-counterfeit system in 2015 generally exhibits an upward trajectory except for 2019, indicating that with an offensive strategy towards counterfeiters in place, the impact on revenue is short-term. The fight against counterfeits has further compromised KSC financial sustainability; a review of the strategic plan revealed that KSC has been operating with borrowed capital and the high interests have had a negative impact on profits, additionally KSC has paused key research related investments due to financial challenges. The evidence underscores that counterfeit seeds may significantly affect the capacity for product development. This serves as conclusive

evidence that counterfeits indeed exert a substantial impact on KSC revenue and profitability hence cupping the capacity for R&D.

#### **4.4.4 Diversification**

KSC has expanded into the East African market, marked by the acquisitions of Simlaw Seed and Kibo Seed in Uganda and Tanzania, respectively. Simlaw Seed specializes in horticultural seeds, along with the sale and distribution of pesticides and fertilizers in East Africa, while Kibo Seed focuses on vegetable seed production. Moreover, KSC is advancing its presence in Burundi, having submitted two wheat varieties to the Ministry of Agriculture, and is in the initial stages of establishing operations in Rwanda and the Democratic Republic of Congo. Simlaw and Kibo also serve as distribution channels for KSC's maize varieties in Uganda and Tanzania.

The acquisition of Kibo and Simlaw was intended to diversify into the vegetable market as well as expand outside Kenya. While vegetable seeds face limited popularity in Kenya due to the prevalent use of farmer-saved seeds, this niche has not been affected by counterfeiting. It emerged from the interviews that among the markets KSC has diversified to, Uganda has experienced the most severe impact from counterfeit. In Uganda, the adoption rate of certified seed is significantly lower compared to Kenya. Asserting this one responded noted that “Farmers in Uganda are not able to differentiate genuine seeds and fake seed and the ensuing farmer complaints has resulted in reputational damage. One time I was stopped by a farmer in Uganda complaining that Kenya seed company seeds are not performing well. I asked him to show me the seed package only to realize it was fake. I asked him where he got the seed and found out it was not the recommended outlet. In fact,

in Uganda I am told there is a place where our seed is counterfeited and sold in the Uganda market. Kenyans are very specific on the varieties they want this is not the case for Uganda”.

Counterfeiters have taken advantage of heightened demand to infiltrate the market. Subsidiaries often face challenges in timely seed supply, providing an opportunity for counterfeiters to take advantage of consumer ignorance and the limited reach of KSC. Ashour et al. (2018), employing a baseline survey and laboratory tests in Uganda, proved that consumers in Uganda adeptly discern counterfeiting, resulting in a cautious approach towards a market infiltrated by counterfeit products.

Notably, counterfeiters in Uganda have extend their operations posing even greater risk of future diversifications as revealed by a respondent “Counterfeit seed mostly affect the new market. I am told there is a place in Uganda where our products go to Sudan, so by the time you go to Sudan you are told the variety is not working, mostly new markets are the target”. When asked whether counterfeits affected the adoption of certified seed and whether the effect the same for new and old varieties in a respondent noted “In Kenya we have high adopted rates, the effect may be in Uganda where the certified seed adoption stands at around 30%”.

#### **4.5 Discussion of Findings**

Based on the findings it is evident that counterfeits affect strategic growth. The cumulative impact of hindered market penetration, unsuccessful diversification endeavors, and the substantial costs linked to anti-counterfeit technology and associated activities not only significantly erodes company profits, diminishing the profitability of strategic growth

initiatives, but also hampers future growth prospects. The overriding issues provided by counterfeits, which include damage reputation, reduced revenue, and limited innovation potential, have two implications on strategic growth: preventing future growth and making existing strategic growth plans unprofitable. This section relates the study finding to theory and previous research.

#### **4.5.1 Alignment with the five forces of competitive advantage theory**

The study's findings are in line with Porter's (1979) proposition that competitive forces extend beyond traditional combats, playing a crucial role in determining profitability and, consequently, should be central to strategy formulation. Porter's views on substitutes indicating that they can influence earnings and growth particularly align with the findings. The adverse effects of substitution, as outlined in this theory of competitive advantage, manifest in market penetration, where the impacts arise from customers choosing counterfeit products over genuine ones. As already anticipated by Porter, these substitution effects have posed significant challenges to revenue at KSC, not only limiting profits but also diminishing the potential gains in times of prosperity.

As relates to diversification the results of the study suggest that companies must diligently assess market profitability (Porter, 1979), considering the presence of counterfeits and their potential impact and that firms should avoid entering markets characterized by rampant counterfeiting. This aligns with Porter's suggestion that the key to growth is to establish a position that is less susceptible to erosion from industry forces. Instead, companies are better positioned to thrive in markets where they have cultivated a significant competitive advantage (Porter, 1996). Negotiating the multifaceted challenges inherent in the intricate



interplay between protecting assets and pursuing strategic advancement underscores the importance of a comprehensive evaluation of market dynamics. Such an assessment is vital for informed strategic decision-making and sustainable growth strategies.

Porter (1979) proposed two approaches to address industry forces: aligning a company's strengths and weaknesses with the industry's structure or constructing defenses against competitive forces. The offensive strategy as is the case of KSC and similar to Porter's recommendation of building defenses against competitive forces, has proven most effective in dealing with counterfeits, given the severe and enduring damage to reputation.

#### **4.5.2 Alignment with the resource base theory**

According to the resource base theory, firm resources are the totality of the assets, capabilities, organizational processes, firm qualities, information, and knowledge controlled by a firm that enable it to devise and implement plans to increase efficiency and effectiveness (Barney, 1991). The overarching idea is that resources are pivotal to firm accomplishments; a firm's achievements depend on the type of resources it can effectively control and utilize. The study's findings underscore the crucial role of firm resources, particularly capabilities, firm qualities, and assets, in the battle against counterfeits.

Firms can increase performance only when conceived strategies exploit opportunities and neutralize threats (Barney, 1991), meaning successful anti-counterfeit strategies acutely hinge on the robustness of assets available. The findings reveal that Companies who have a track record for aggressive retaliation to imitations and who have great influence on distribution channels which tighten control and inspection pose a threat to counterfeiters;

these firms possess financial ability and willingness to invest in anti-counterfeit technology and education of consumers (Kelley & Karagozolu, 1991).

The essential role of resources is further emphasized by the detrimental effects that arise for the firm when its resources are depleted or eroded. It is evident from the study that extensive counterfeiting results in a detrimental erosion of reputational assets which in turn has an impact on diversification and market penetration. Reputational assets, as they encapsulate substantial information about firms and influence the responses of customers, suppliers, and competitors (Teece et al., 1997), can positively impact a company's future earnings (Chen, Yu, & Murray, 2013). Conversely, when these reputational assets turn toxic, they impede earnings. Moreover, counterfeits are a threat to product development capability since anti-counterfeit strategies are externally directed hence expensive (Saebi et.al, 2017); actions involve extensive amounts of resources which could constrain future actions (Chattopadhyay et.al. ,2001)

Barney (1991) indicated that firm reputations arise from informal and complex settings hence causality is ambiguous; they are dependent upon specific historical backgrounds that are difficult to imitate this explains that KSC strong customer relationships and brand equity in the older markets are subject to this formation hence have become hard to replicate to other markets. Firms are inherently shaped by their historical and social contexts, and their capacity to acquire and leverage certain resources is contingent upon their specific location and environment.

### **4.5.3 Comparison with empirical studies**

Findings on consumer perception indicate that brand equity and consumer loyalty are necessary in the fight against counterfeits as demonstrated in KSC older markets. In a similar stance Gabrielli, Grappi, and Baghi (2012) note that consumers are more effective than companies in arguing about a brand's excellence, originality, and worth, and thus are valuable allies in the fight against counterfeiting. To maintain brand integrity, Rutsaert & Donovan, (2020) suggest adopting a proactive approach to strengthen connections with authentic product consumers is paramount. These results challenge the popular belief that consumers accurately discern counterfeiting tendencies and will naturally avoid markets proliferated by counterfeits (Akerlof, 1970; Ashour et.al., 2018; Gharib, 2018). As in the case of KSC, it is crucial for companies to invest in their brand and cultivate robust customer relationships as integral strategies for combating counterfeits.

The study revealed that a lack of comprehensive information about a brand and its product performance contributes to counterfeiting, either through substituting authentic products with counterfeits for cost advantages or mistakenly attributing counterfeit goods to legitimate producers, resulting in brand avoidance. This aligns with Gharib (2018) findings on farmers' struggles to identify fake seeds due to information gaps. In support, ACA (2020) suggests that the demand for illicit trade is linked to the limited ability to accurately identify counterfeit products, leading to a reactive approach hence irreversible damage. However, Ashour et.al. (2018) cast doubt on the notion that more information is needed and affirms that more information does not necessarily results in better purchase decisions.

The study uncovered that counterfeits are detrimental to innovation as seen by the negative impacts on product development as result of high anti-counterfeit costs. Innovation is a driver of growth, firms that innovate grow faster (Mason, Bishop, & Robinson, 2009) because in creating new products and extending offerings firms are able to capture new customers accordingly. However, a notable concern arises: an unfavorable financial position has the potential to significantly constrain the capacity to fully capitalize on these growth opportunities This detrimental impacts on innovation differs from that of Qian (2014) who concluded that counterfeits spur innovation. However, Cuntz & Qian (2020) in agreement with the study finding noted that counterfeiting's significant impact was on profit, with a notable decrease in operating profit due to additional costs. Compromised innovation and consequently product development arises because what a firm can achieve and where it can move are constrained by its asset endowment and strategic alternatives available (Barney, 1991).

Also related to this finding are previous works that postulate that in general, agents tend to underinvest when they cannot fully reap the benefits of their investments (ACA ,2020; Buttice et al.,2020; Cuntz & Qian, 2020). According to Buttice et al. (2020), companies impacted by counterfeiting tend to redirect their investments towards safeguarding their competitive edge this has been evident in KSC. However, this type of investment does not benefit either the individual company or the industry as a whole. Notably, Producers allocate significant efforts to combat counterfeiting, diverting resources from more profitable endeavors such as innovation (Karingu, Patrick, & Ngugi, 2013).

The study established that counterfeits make diversification unprofitable. In the realm of strategic growth, the overarching goal for diversification is to identify and seize

opportunities for profitable expansion while simultaneously fortifying market positions, ensuring stability, and fostering adaptability (Ansoff, 1957). Failure of diversification arises when genuine producers are pushed out of the market; dishonest dealings tend to drive honest dealings out of the market (Akerlof, 1970) as was the case of Uganda where counterfeiters have taken over the market. In a similar stance Ashour et al., 2018 conceded that market Perceptions of product quality and authenticity play a crucial role in influencing the firm's reputation and, consequently, product adoption and that consumers stay out of markets proliferated by counterfeits. However, research on the luxury products contradict this finding suggesting that counterfeits are promotional devices (Bekir et.al, 2011; Buratto et al.,2015).

In summary, counterfeit seeds not only impede future growth but also constrain the profitability of strategic expansion efforts. The findings recommend caution for companies, particularly those with low performance like KSC, when entering markets with widespread counterfeiting to avoid exacerbating financial challenges.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.0 Introduction**

In this concluding chapter, a thorough overview of the research findings is presented, summarizing the extensive exploration into managers' perception of the effect of business counterfeiting on the strategic growth of the Kenya Seed Company. The summary encapsulates the key insights gained throughout the research process, while the conclusion offers decisive answers to the research question. Practical recommendations are delineated for both immediate implementation and policy considerations, providing actionable insights for stakeholders. Additionally, the chapter outlines suggestions for future research

### **5.1 Summary**

This research was a comprehensive investigation into manager's perception of effect of counterfeiting, particularly its impact on strategic growth. The research objective was clearly defined as determining manager's perception of the effect of business counterfeiting on the strategic growth of the Kenya Seed Company. This objective aligns with a specific research question: what is the perception of managers on the effect of the business counterfeiting on the strategic growth of Kenya Seed Company? The study, guided by Resource-based theory and Porter's five forces of competitive advantage, sought to address a significant gap in the existing literature by examining the dynamics of counterfeiting within the seed sector of developing countries, focusing on the specific context of the Kenya Seed Company.

In chapter one, the research introduces the significance of the threat of counterfeiting to businesses and the conceptualization of the study. The use of Resource-based theory and Porter's five forces framework provides a theoretical foundation for the study. The chapter also outlines organizational responses to external threats, highlighting the challenges posed by global threats such as product counterfeiting followed by an introduction of the concept of strategic growth. The research problem is framed around the inadvertent underrepresentation of the seed sector in counterfeiting literature and the uncertain understanding of counterfeiting's impact on strategic growth.

Chapter Two builds a comprehensive foundation for the study by conducting a thorough literature review, exploring the multifaceted challenges posed by counterfeiting across different dimensions. This sets the stage for the empirical investigation that follows. In Chapter Three, the research methodology is outlined, employing a case study design with a mixed-method approach. The focus is on descriptive research to provide detailed insights into the impact of counterfeiting on strategic growth. Data collection involved primary sources through semi-structured interviews and company records, along with secondary sources. The analysis combined descriptive statistics for quantitative data and thematic analysis for qualitative data, concentrating on the four dimensions of strategic growth.

Chapter Four delved into data analysis, results, and discussion regarding the impact of counterfeiting on the strategic growth of the KSC. The chapter is organized into sections, providing a detailed examination of the challenges posed by counterfeit seeds, the company's strategies to mitigate them, and broader implications for strategic growth. The discussion encompasses conditions necessary for product counterfeiting, the impact on market penetration, diversification efforts, and financial position of KSC.

## **5.2 Conclusion**

Overall, the research contributes to the understanding of how counterfeits affect strategic growth, offering valuable insights for policymakers and company management in devising effective counterfeiting mitigation strategies. Counterfeit seeds have a significant adverse impact on the strategic growth of the KSC. The study highlights that the presence of counterfeit products hampers KSC's market penetration and diversification efforts by eroding brand integrity and consumer trust. The financial burden stemming from anti-counterfeit measures constrains KSC's ability to allocate resources towards innovation and research, which are essential for product development.

The overarching challenges posed by counterfeit seeds, encompassing compromised reputation, diminished revenue, and restricted innovation potential, have dual effects on strategic growth: impeding future expansion and rendering current strategic growth initiatives unprofitable. The study suggests that companies, particularly those with low performance like KSC, refrain from entering markets characterized by widespread counterfeiting. This caution is rooted in the potential exacerbation of their financial position that could result from engaging in such markets. Fundamentally, the existence of counterfeits not only hinders future growth but also constrains the profitability of strategic expansion.

## **5.3 Recommendations of the study**

The study recommends that KSC should intensify consumer education initiatives in the newer markets by implementing comprehensive programs to raise awareness about genuine seed characteristics. To reinforce KSC supply chain resilience against



counterfeiting, the study recommends that KSC should strengthen its corporate governance practices by implementing measures to minimize the risks of corruption and theft in the material supply process. Additionally, KSC should establish proper disposal guidelines for low germinating seeds to prevent their reintroduction into distribution lines, reducing the risk of counterfeit infiltration. Further, KSC should strengthen its quality control measures throughout production and distribution. These measures collectively fortify KSC's operational integrity and supply chain resilience against counterfeit threats. The study further recommends that KSC must conduct thorough assessments before entering new markets, avoiding those characterized by rampant counterfeiting challenges.

The comprehensive approach to strengthen the seed sector against counterfeiting involves two additional recommendations. Firstly, efforts should be directed towards holding consumers accountable for knowingly purchasing counterfeit seeds through awareness campaigns, penalties, and enhanced education programs. Secondly, fostering collaboration between KEPHIS and seed companies is crucial, emphasizing data sharing from KEPHIS's anti-counterfeit system to strengthen monitoring efforts. Additionally, advocating for regular research initiatives by KEPHIS to quantitatively assess the impact of counterfeiting on the seed sector will provide valuable insights for evidence-based decision-making.

#### **5.4 Limitations of the study**

The study is limited by its relatively surface-level exploration of the psychological and social factors influencing counterfeiting in the context of seeds. The lack of an in-depth examination of farmers' perceptions, cultural influences, and individual motivations represents a constraint on the comprehensive understanding of why farmers may choose

counterfeit seeds. To alleviate the study's limitations and strengthen its credibility; the researcher deliberately integrated insights from industry reports to mitigate the impact of these limitations on the overall comprehensiveness of the study. This methodological expansion aimed to offer a more complete perspective by triangulating information from varied sources, ensuring a refined understanding beyond the sole reliance on respondents.

## **5.5 Suggestions for further research**

The study effectively underscores the influence of consumer behavior on counterfeiting in the context of seeds, yet there is an opportunity for a more thorough exploration of the psychological and social factors steering these decisions. A detailed examination of these factors, encompassing farmers' perceptions, cultural influences, and individual motivations, is crucial for a comprehensive understanding of why farmers might choose counterfeit seeds. This will yield valuable insights, facilitating the development of targeted strategies that address the underlying causes of counterfeiting-related behavior in the agricultural sector; a comparative case study featuring major markets would be appropriate.

Additionally, while the study acknowledges the financial challenges associated with counterfeit seeds, it would benefit from a thorough financial analysis and a comprehensive cost-benefit assessment of the anti-counterfeit measures. A detailed examination of the costs involved in implementing and sustaining these measures, weighed against potential benefits would offer invaluable insights. Moreover, an exploration of the long-term financial implications, including the return on investment for anti-counterfeit initiatives in the agricultural sector, would empower organizations to make informed decisions regarding resource allocation.

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## APPENDICES

### Appendix 1: Introduction Letter

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Our Ref. **D61/11932/2018**

**October 09, 2023**

Kenya Seed Company Limited  
Mbegu Plaza, Kijana Wamalwa Street  
P. O. Box 553- 30200,  
**KITALE**

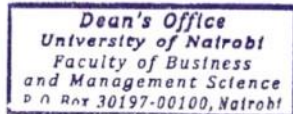
**RE: INTRODUCTION LETTER: ANNETTE CHAHILU MMBOGA**

The above named is a registered Masters in Business Administration candidate at the University of Nairobi, Faculty of Business and Management Sciences. She is conducting research on **“EFFECT OF BUSINESS COUNTERFEITING ON STRATEGIC GROWTH OF KENYA SEED COMPANY”**.

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the Project.

The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your co-operation will be highly appreciated.



**PROF. JAMES NJIHIA**

**DEAN, FACULTY OF BUSINESS AND MANAGEMENT SCIENCE**

## **Appendix 2: Interview Guide**

### SECTION 1; KNOWLEDGE ABOUT COUNTERFEIT SEED

1. Does your company have a database for seizures/confiscated fake seeds?
2. What has been the trend of counterfeit seeds in the seed sector? Which periods were the worst (give a range)
3. How would you rate the extent of counterfeiting for Kenya seed products compared to other seed companies in the market?

### SECTION 2; IMPACT OF COUNTERFEITS

1. How have the incidences of seed counterfeiting affected your reputation?
2. Have you changed your mode of operation as a result of counterfeits?
3. What is the approximate loss in sales monthly as a result of counterfeits? How is this measured?
4. How have counterfeits affected the adoption of certified seed? Is the effect the same for both new and old varieties?
5. Have counterfeits affected variety uptake in new markets? (both domestic and international)
6. Have there been changes to your product line in response to counterfeits
7. How has the market share responded in the face of counterfeit seed?
8. What additional costs has your company had to incur as a result of counterfeiting?
9. Have counterfeit impacted R&D and innovation (New products, new processes, business structure aimed at improving efficiency, effectiveness, and competitive advantage)
10. Has the company implemented any diversification? To what extent has this been fueled by the presence of counterfeits?

### SECTION 3; RESPONDING TO COUNTERFEITS

1. What resources/capabilities give Kenya seed an upper hand in dealing with Counterfeits?
2. What capability do you need to acquire?
3. What is the company-wide engagement in the fight against counterfeits?
4. What strategies has the company implemented in dealing with counterfeits