

# **Clustering and Product Innovativeness: A Literature Review of Small and Medium-Sized Enterprises (SMEs) in Kenya**

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## **ABSTRACT**

The effect of clustering on product innovativeness in manufacturing SME sector has been analyzed in this study. The cooperation of firms at national level and on a global scale is becoming more and more important as a tool of economic development. SMEs tend to work together in order to share their competencies, reduce various costs, consolidate limited resources,

and hereby increase their productivity, product innovativeness, and profitability. Clusters create the environment for innovation and technological advancement. Therefore, SMEs may gain additional benefits that include know-how, cost-saving options, and innovative products to fulfill unmet customer needs. The study has concluded that the clustering of manufacturing SMEs is closely related to product innovativeness and hence their competitiveness at the local and regional level.

**Keywords:** Small and medium-sized enterprises, Manufacturing, Clustering, Product Innovativeness, Kenya

## **1.0 INTRODUCTION**

Over the last two decades, the role of clusters and regional innovation systems has received much attention in research (Frisillo, 2007; Karlsson 2007; Porter 2000). Despite the widely held view that clustering can play an important role in fostering incipient industrial development, especially in poor regions (Schmitz & Nadvi, 1999) and also enhance the ability to innovate (Frisillo 2007), little is known of the effect that clustering has on product innovativeness among manufacturing SMEs in developing countries such as Kenya. In order to remain competitive, SMEs do need to continually improve and enhance their products innovativeness (Salavou & Avlonitis, 2008). Most of the manufacturing SMEs in Kisumu Municipality seem to be operating in clusters, manufacture similar products and target the same market. This has resulted in an intense inter-firm rivalry since firms are competing for not only customers but also skills supply in the labour market. This therefore underscores the importance of undertaking a study on the effect of clustering on product innovativeness among manufacturing SMEs in Kisumu Municipality, Kenya.

## **1.2 The concept 'clusters' and 'clustering'**

The concept of 'clusters' is used relatively broadly in the research literature. This may be due to the fact that 'clusters' and 'clustering' encompasses a wide range of dimensions and schools of thought. Due to the long history and the wide nature of the term, it goes by different names in the literature such as 'industrial districts', 'agglomerations' (Marshall 1920; Martin & Sunley, 2003), 'knowledge communities' and 'dynamic knowledge systems' (Reve, 2009). Depending on the field of interest, scholars have offered competing definitions on the concept of clustering. Cortright (2006) argues that a cluster, in the most general form, consists of firms and related economic actors and institutions that draw productive advantage from their mutual proximity and connections. This is a general definition drawing on ideas from geographic, social and competitive studies. Andersen (2010) uses the term cluster when referring to firms in a region with high levels of agglomeration or geographically proximate or co-located.

The growing interest in clusters can be traced back to a number of changes in the competitive environment of the firm that became increasingly evident over the 1970s, 1980s and 1990s. The first was the growing knowledge-intensity of production which gradually extended to cover a broad spectrum of traditional industries from the shrimp and salmon fisheries in the Philippines, Norway and Chile, the forestry and flower enterprises in Kenya and Colombia, to the furniture in Uganda (Oshida, 2009), the auto parts cluster of Nnewi, Nigeria (Schmitz & Nadvi, 1999), the *batik* which is the traditional Indonesian textile, and clothing firms in Denmark, Italy, Taiwan and Thailand automobile clusters.

The second was the emergence of innovation-based competition and its globalization, as traditional barriers to trade and investment were dismantled (Mytelka & Farinelli, 2000). These changes have significantly altered the competitive environment for firms in all sectors and placed a greater burden on small and medium-sized enterprises (SMEs) to engage in a continuous process of innovation. This has led to the emergence of "India's Silicon Valley" - Bangalore Software clusters, the Taiwanese computer industry, the surgical instrument cluster of Sialkot, Pakistan (Schmitz & Nadvi, 1999) and disk drive manufacturers in Singapore. In the US numerous examples, which include microelectronics and biotechnology in Silicon Valley, the auto industry in Detroit, financial services in New York, the aircraft industry in Seattle, and the Hollywood entertainment cluster (Porter, 2003).

Studying patterns of economic activities and co-location, the so-called industrial agglomerations among industrial districts in England, Marshall (1920) explained business prosperity through the lens of economic geography. Marshall identified three main reasons why a certain set of firms within a given industry would be more productive if located in close proximity. These reasons are often referred to as the Marshallian Trinity and include knowledge spillovers, labour market pooling, and supplier specialization (Boja, 2011; Oshida, 2009).

Porter (1998) has since argued that while co-location is not sufficient for cluster formation, it 'supercharges' and magnifies the power of local rivalry which is the major urge to continuous

innovation and improvement. Despite criticisms regarding the generality of the cluster concept, the widely accepted descriptions regarding clusters are:

*“geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in particular fields that compete but also co-operate” (Porter, 1998: 199).*

*“clusters are not seen as fixed flows of goods and services, but rather as dynamic arrangements based on knowledge creation, increasing returns and innovation in a broad sense” (Krugman, 1991) .*

Porter redefined the cluster concept in a new analysis, concentrating on the type of relations that exists between cluster members —a geographically proximate group of inter-connected companies and associated institutions in a particular field, linked by commonalities and complementarities (Porter, 2000), and defining its boundaries that can —*range from a single city or state to a country or even a group of neighbouring countries (Porter, 2000)*. The latter description extends the concept outside a limited region and takes into account the effect of global markets. Krugman's and Porter's analyses add to the economic relations and flows of goods the process of innovation that takes place inside the cluster through the transfer of information, know-how and experience.

Based on these descriptions, the geographic concentration of business activity – otherwise referred to as “clustering” – can give rise to economic benefits for the firms concerned. These benefits are known as “agglomeration economies”. In this study, the researcher will adopt a working definition of SME clustering as the social interactions that occur between interconnected firms and associated institutions in a particular field, as a consequence of either being geographically proximate or organizationally proximate with a view to bringing new and unique products to **the** extent of fulfilling unmet market needs

### **1.3 The Problem**

Over the last two decades, the role of clusters and regional innovation systems has received much attention in research (Carpinetti, Galda'mez & Gerolamo, 2008; Frisillo , 2007; Karlsson 2007; Porter 2000). Despite the widely held view that clustering can play an important role in fostering incipient industrial development, especially in poor regions (Schmitz & Nadvi, 1999) and also enhance the ability to innovate (Frisillo 2007), little is known of the effect that clustering has on product innovativeness among manufacturing SMEs in developing countries such as Kenya.

Despite the literature reviewed highlighting the positive contribution of clustering on product innovativeness, the SMEs' relatively weak innovation performance in Kisumu municipality, Kenya is of concern because innovation is the key driver of prosperity and growth as firms and countries compete for the diminishing market share. While SMEs can grow by investing in productive capacity and adopting technology developed elsewhere, there is need to raise the productivity frontier by introducing new-unique products, services or ways to serve customer needs in unmet markets in order that the firm sustain their prosperity. To this end, clustering

can be instrumental in improving and enhancing product innovativeness. This was the focus of this study

**The object of the study:** to determine the effect of clustering on product innovativeness Among manufacturing SMEs in Kenya.

**The specific Objectives of the study are:**

1. To analyze the conception of clustering and product innovativeness in SMEs
2. To analyze the relationship between clustering and product innovativeness in SMEs
3. To evaluate the benefits of clustering to manufacturing SMEs.

**The methods of research:** systematic-logical analysis of scientific literature, synthesis, holistic approach.

## **2.0 LITERATURE**

### **2.1 Cluster Drivers**

Cluster firms are motivated to compete with one another and it induces their innovativeness (Boja, 2011; Moyi & Njiraini, 2005). Navickas and Malakauskaitė, 2009) aver that the productivity of cluster SMEs is determined by the following factors: (1) better access to specific information; (2) broad supply of labour force;(3) easy access to capital resources; (4) reduced cost of operation (economies of scope and scale); (5) cooperation benefits – cluster firms activities complement one another. As can be noted from the aforementioned factors, clusters draw their rationale from the conception of (1) ‘economies of scale’. The concept refers to sources of productivity that can be leveraged outside the formal boundaries of individual firms, normally embedded in regional economies; (2) ‘collective efficiency’ a concept that refers to the competitive advantage derived from the combination of local external economies and cooperative joint actions (Carpinetti, Galda´mez & Gerolamo, 2008; Schmitz and Nadvi, 1999).

Business partnerships are generally perceived as a mode of steady cooperation among vertically integrated companies. As opposed to spontanoc occasional relations of firms, partnerships result in an increased trust and more efficient coordination of activities (Edelman *et al.*2004;Navickas & Malakauskaitė, 2009).

Partnerships often are informal; thus the incentive to confirm the cooperation by a formal agreement is the first step to forming a strategic alliance. Companies that participate in this agreement have to make strategic decisions about their obligations and rights, the division of possible revenues obtained from their cooperation, and other important issues (Navickas & Malakauskaitė, 2009). Strategic alliances have various peculiarities in comparison with partnerships: (1) strategic alliances tend to form in R&D and high-tech sectors; (2) strategic alliances, unlike all informal partnerships, concentrate on cooperation results rather than cooperation process; (3) strategic alliances are usually created for a particular purpose and certain period of time, while partnerships can last for an undefined period of time.

Networks are often confused with clusters, because both forms of cooperation embrace a value chain as the most important element that binds their firms. Moreover, clusters can form inside networks, while networks can operate inside clusters. Clusters, however, include a wider range of organizations, such as academic, financial, and government institutions, thus their field of operation and effect is far broader than that of networks. (Navickas & Malakauskaitė, 2009; Oliveira 2008).

## **2.2 Benefits of Clustering**

Industry clusters do bring together both the firms producing final goods and their suppliers and contractors, the so called supporting and related firms. At the same time, clustering attracts the economic infrastructure of an industry, such as specialized business services, human resources and training institutions (Asia Pacific Economic Co-operation, 2006). Firms in a cluster therefore cooperate at industry level, while competing at firm level (Boja, 2011; Moyi & Njiraini, 2005). International experience from both developed and developing countries have illustrated the potential of clustering to improve innovativeness, hence manufacturing performance and competitive advantage over isolated (non-cluster) firms (Appall, 1995; Knoblen, Raspe, Arikan, 2011; Knoblen, Oerlemans & Rutten, 2008; Nel & Makuwaza, 2001).

The gains of clustering include localized external economies, particularly economies of scale and scope as small firms specialize and engage in a division of labour (Carpinetti, Galda'mez & Gerolamo, 2008; Karaev, Koh & Szamosi, 2007). Geographical proximity also creates possibilities for local cooperation, between firms and through local institutions and enhances their ability to compete in local and global markets (Boja, 2011; Fissile, 2007). Clustering also reduces barriers to entry, given that new firms have access to an established pool of resources (Porter, 2003). Schmitz (1995) captures these clustering advantages in the concept of collective efficiency, distinguishing between passively acquired benefits that arise from specialized agglomeration—of skills, inputs and knowledge and actively generated gains that accrue from the joint action of clustered actors. Thus, cluster-based producers and workers can be potentially better off than they would be if they were operating in isolation. In addition, clusters are also said to be marked by a strong sense of common social identity. This is often based on shared norms or common notions of community that lie in ethnic, religious, regional or cultural identities. This can result in local social capital that strengthens cluster ties, fosters trust between local actors and promotes local cooperation and support (Boja, 2011).

## **2.3 Innovation and Innovativeness**

Innovation is a necessary and a fundamental function of the entrepreneurial process (Drucker, 2002; Fill, 1996; Kirzner 1979; Schumpeter, 1934). It is the everyday innovations, not the inventions that help firms make progress (Frisillo, 2007). In the business environment, innovation is associated with doing something new or different (Yahya, Othman, Othman, Rahman & Moen. 2011; Garcia & Calantone 2002). Rogers (2003) defined innovation as an idea, practice or product that is perceived as new by the potential adopters even if it had existed earlier elsewhere. According to Dibrell, Davis, & Craig (2008) innovation represents either a technology, strategy, or management practice that a firm is using for the first time, whether

other firms or users have previously adopted; or as a significant restructuring or improvement in a process. It represents a new product that a firm has created for the market and the commercialization of an invention, where invention is an act of insight. The key word in these definitions on innovation is 'new'. The newness is reflected on the product, process, marketing methods and organizational methods within the organization. The definition on innovation goes more into the observable aspect of this process, the output, more specific the innovation itself.

Salavou and Avlonitis (2008) aver that innovation is a broad concept that is conceived in a variety of ways. Prior attempts to capture what really constitutes the term of innovation have resulted in widely varying conceptualizations. Innovation and innovativeness are either distinguished from each other or used interchangeably (Damanpour,1991).Nevertheless, innovation seems to incorporate the adoption or/and implementation of "new" defined rather in subjective ways, whereas innovativeness appears to embody some kind of measurement contingent upon an SME's proclivity towards innovation.

Innovativeness is difficult to operationalize due to inconsistencies in the definition of innovativeness by various scholars. Innovativeness is the seeking of creative, unusual or novel solutions to problems and needs. These solutions may be novel technologies and processes, as well as new products and services. Hurley and Hult (1998) make a distinction between *Innovativeness* and the *capacity to innovate*. They define innovativeness as the notion of openness to new ideas as an aspect of a firm's culture. The capacity to innovate is defined as the ability of the organization to adopt or implement new ideas, processes, or products successfully. This capacity can be measured by the number of innovations an organization is able to adopt or implement successfully. Lumpkin and Dess (1996) hold that "innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes" (p. 142). Hilmi and Ramayah (2008) defined innovativeness as the ability to create something new or bring about sound renewals and changes by acting in a way that utilizes this ability. Innovativeness is also defined as a firm's overall innovative capability of introducing new products to the market, or opening up new markets, through combining strategic orientation with innovative behavior and process (Wang & Ahmed, 2004). Hult, Hurley and Knight (2004) postulated innovativeness as the firm's capacity to engage in innovation, a view echoed by Salavou and Avlonitis (2008).

In SMEs, innovativeness implies a willingness of the owner to learn about and adopt innovations (Tajeddini & Trueman, 2005;Verhees & Meulenberg, 2004). Such an inclination is termed entrepreneurial orientation (EO), often reflected in the entrepreneur's risk-taking propensity and proactiveness (Otieno, Bwisa & Kihoro, 2012); market orientation which is exhibited in being customer focused (Tang & Murphy, 2012) as well as embracing market-focused strategy and effective inter-functional coordination. Studies have shown that clustering does improve cluster SMEs' efficiency and effectiveness (APEC, 2006; Braun, McRae-Williams & Lowe, 2005). In addition it facilitates learning, allows an exchange of knowledge and ideas (Tang & Murphy, 2012) through direct contact and free movement of labour; knowledge spillover also

imposes on firms a high pace of EO, innovativeness and higher productivity (Andersen, 2010; Boja, 2011).

#### **2.4 Product Innovativeness**

Schumpeter (1942) posits that product innovativeness is highly connected to market innovativeness and often studied as product-market innovativeness. This study refers to market innovativeness as the newness of approaches that SMEs adopt to enter and exploit the target market with emphasis on the novelty of market oriented approaches. In fact, Ali *et al.* (1995) consider innovativeness as a market based construct and define innovativeness as the uniqueness or novelty of the product to the market. Product innovativeness can be differentiated from product innovations.

Ali, Krapfel and LaBahn (1995) defined product innovativeness as the uniqueness or novelty of a new product to the customer. According to Van de Ven (1986) product innovation refers to the development and implementation of a new product in the adopting firm or markets. Similar to Rogers' (2003) innovation characteristics of a new product (relative advantage, compatibility, complexity, observability, and trialability). Gudda (2015) avers that product innovativeness is the propensity of a firm to innovate or develop new products that meet and / or exceed customers' expectations or the extent of unmet market needs as reflected in its uniqueness in comparison to similar products offered in the market.

Innovativeness in SMEs means that they can enter a market or identify a new market niche and launch new products with cutting-edge attributes (Hilmi & Ramayah, 2008). An alternative approach would be based on existing products, but with adoption of new marketing programmes to promote the products and services (Tajeddini & Trueman, 2005). Under both circumstances, the SME is very likely to take up against new competitors either in a new market, or an existing market segment. While product innovativeness maintains a central focus of product newness, market innovativeness emphasizes the novelty of market oriented approaches. Although they are treated as salient factors, product and market innovativeness are inevitably inter-twined.

#### **2.5 Resource Based View (RBV) and Firm Innovativeness**

Edith Penrose (1959) is credited as one of the pioneers of the resource based view (RBV) of the firm. This is mainly for her description of the firm as an evolving collection of resources (Rugman & Verbeke, 2002). A number of different definitions exist for resources at the firm level. According to Mathews (2003) resources refer to the finite assets available to a firm. Resources can either be tangible (technologies and capital goods) or intangible (know-how, patents and intellectual property rights). Julienti, Bakar and Ahmad (2010) aver that intangible resources consist of knowledge, skills, reputation and entrepreneurial orientation (EO) exhibited in proactiveness, competitive aggressiveness. Risk-seeking ability and innovativeness. Aloulou and Fayolle (2005) define EO as the "CEO's strategic orientation reflecting the willingness of a firm to engage in entrepreneurial behavior" (p. 27). As such, entrepreneurial firms have three main characteristics, namely possessing innovativeness, proactiveness and risk-taking (Avlonitis & Salavou, 2007). These characteristics reflect a willingness to foster

new ideas (Gudda, 2015). and to adopting change critical to product innovation (Tang & Murphy, 2012; Otieno, Bwisa & Kihoro, 2012). Among the numerous values associated with risk taking are the following: freedom to try things and fail, acceptance of mistakes, freedom to discuss "dumb" ideas, absence of punishment for failure, ability to challenge the status quo, lack of attention to the past, willingness not to focus on the short term, the expectation that innovation is part of the job, a positive attitude toward change, and a drive to improve

Entrepreneurs are risk takers, but the perception that they carelessly bear risk is not accurate (Gudda, 2015). Innovative firms take measures to try to reduce, minimize, and/or eliminate risks. It is important that successful entrepreneurs understand when to avoid additional risk. Successful entrepreneurs realize that, when a new product development project is not yielding the desired results, it is acceptable to abandon the project. Unsuccessful entrepreneurs cannot abandon the new product development project because of the hope of a "breakthrough" at some time in the future. Otieno, Bwisa and Kihoro (2012) aver that the successful entrepreneur is a "moderate" risk-taker.

Proactiveness is critical to achieving innovativeness. Entrepreneurs must be focused and positioned to seize opportunities. They must continuously scan the external environment (Gudda, 2015). and be situated to move quickly. Proactiveness is a willingness of Entrepreneurs to seize situations and create opportunities. Proactiveness is concerned with implementation and doing whatever is necessary to bring an entrepreneurial concept to fruition. Entrepreneurs must be able to aggregate, to evaluate, and to formulate into workable programs/services the new ideas that have been generated within the firm or imported from the outside.

According to Yanto (2011), the RBV is based on the idea that first, a firm's resources, capabilities, and competencies improve the sustainable competitive entrepreneurial advantage, and secondly, competitive entrepreneurial advantage can be achieved if firms are able to formulate strategy with appropriate resources. The RBV of the firm does attribute a more proactive role for the firm in causing economic disequilibrium as opposed to simply responding to it. Firms achieve disequilibrium in the form of sustainable competitive entrepreneurial advantage.

Sustainable competitive entrepreneurial advantage is generated by the acquisition, development and use of resources (Carpinetti, Galda'mez & Gerolamo, 2008) and capabilities that other firms cannot match (Isobe, Makino & Montgomery, 2008). The process associated with creating and defending competitive entrepreneurial advantage can be compared to the process of innovation. Both require the firm to learn. Those firms with access to the most advanced knowledge and skills in any particular sector will be better equipped to generate cutting edge innovative products that will lead the sector (Knoben, Raspe & Arikan, 2011).

The RBV perspectives emphasize internal resources such as equipment, physical capital, human capital routines, finance and provide the basis for future developments. They are therefore a *static* concept, existing in one particular point in time. These internal resources are critical to a firm's innovative capabilities and competitive entrepreneurial advantage (Andersson & Lööf,



2009). According to Dodgson and Hinz (2001) innovative capabilities include a range of activities— proactively searching, acquiring, implementing, integrating, coordinating, and learning— and are *dynamic* in nature, allowing firms to transform themselves by utilizing the options created by the resource base.

Danneels and Kleinschmidt (2001) invoked the RBV of the firm in the operationalization and reporting of product innovativeness. They also conceived of firm and customer perspectives. They viewed the firm perspective as having two subcomponents: (1) familiarity with technical and marketing environments; and (2) fit with technical and marketing resources. The customer perspective consists of product attributes, adoption risk, and requirements for behavioral change (Roger *et al.*, 2006). Garcia and Calantone (2002) described micro (firm) level newness as dependent on a firm's capabilities and competencies in marketing and technical areas. Similarly, Garcia and Calantone's product innovativeness classification framework views both industry and firm-level technical and marketing know-how newness as indicators of overall product innovativeness, which consequently influence customer newness.

Researchers (Hadjimanolis 1999; Hewitt- Dundas, 2006; Isobe, Makino & Montgomery, 2008) have used RBV to show that differences in innovative activities between cluster SMEs can be due to resource base differences. Baldwin & Lin (2002) and Mohen & Roller (2005) posit that SMEs differences in innovation were related to cost, institutional constraints, human resources, organizational culture, flow of information, and government policy. Applying the RBV Guijarro, Garcia, and Auken (2009) showed that SMEs were particularly restricted by innovation barriers because of their more limited internal resource base. In a study by Hall and Bagchi-Sen (2002) they found that to overcome such limitations, the smaller actors tend to combine their resources and capabilities to generate innovative outputs.

Internal resources affect firm efficiency in many ways, such as creating more value by reducing production cost (Carpinetti, Galda'mez & Gerolamo, 2008) or providing high quality and innovative products. However, firm resources are not equally valuable. It is important to note that the value of firm resources is contingent on relational capabilities embedded in external ties. According to Isobe, Makino, & Montgomery (2008) social ties help firms gain better position to exploit internal resources. In the absence of social ties, firms are less likely to access intangible external resources, such as valuable information, tacit knowledge, and complementary resources resident in other firms (Carpinetti, Galda'mez & Gerolamo, 2008). If firms are restricted to cultivating resources internally, it leaves the creation and combination of firm resources in a rather closed system, which may result in a limited opportunity set for firm innovation.

Although SMEs have limited resources, some of them are unique and are well-positioned compared to their competitors to create value products for consumers and also provide the greatest potential for wealth creation and redistribution (Julienti, Bakar & Ahmad, 2010). Fatoki (2011) posit that for SMEs, the critical resources are likely to be held by the individual entrepreneurs. Such resources are likely to be reflected in their skills, knowledge, experience and education. The lack of separation between ownership and control in SMEs suggests that

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the entrepreneurs themselves are responsible for the innovations in their firms. Hence, the success or failure of the SMEs is largely influenced by the skills and abilities of the owners. To mitigate these constraints SMEs tend to cluster.

Taylor and McRae-Williams (2005) posit that clustering simulates large firm behaviour, such as when small firms are not in a position to internalize externalities through economies of scale; they cluster to access resources, to reduce costs, to compete with larger firms, and to innovate. Thus by networking and sharing knowledge, small firms are able to compete for and access specialized resources and information systems as well as internalize competencies and assets that typically are internalized by large firms with economies of scale (Taylor & McRae-Williams, 2005). Hence, clustering provides SMEs benefits that would be unavailable or be available at a greater cost to non-clustering members (APEC, 2006; Knoblen, Raspe, & Arikian, 2011). While value-added and activities such as R&D, access to a global client base and advanced business services/production are clearly major contributing factors for SMEs clustering, the need to access localized explicit and tacit knowledge networks has proven to be a central driver for clustering (Gudda, 2015; Huggins & Johnston, 2010; Johansson, Lööf & Olsson, 2005; Keeble, 2000).

### **3.0 Insights from the Review**

The essence of a modern cluster lies in the fact that small and medium-sized companies have to concentrate their activities on their main competencies. It enables them to maximize the above mentioned benefits. Other benefits of clustering and product innovativeness are presented in Table 1 below

**Table 1: Benefits of clustering and product innovativeness**

<b>Benefits</b>	<b>Explanation</b>
Attain collective efficiency	In order to become competitive in a wider market, SMEs may attain collective efficiency through proximity, specialization, social cohesion, and collaboration (Boja, 2011; Najib & Kiminami, 2011; Oshida, 2009; Schmitz, 1995 ; Schmitz and Nadvi , 1999).
Economy of cost and scope	Cluster firms tend to minimize their costs through specialization, as they make use of their key competencies and choose only the cheapest and most efficient production alternatives (Carpinetti, Galda´mez & Gerolamo, 2008); Pooling production in a cluster reduces the transaction costs of purchasing inputs and marketing outputs, and therefore attracts traders (Najib & Kiminami, 201; Navickas & Malakauskaitė 2009).
Interdependency	Cluster firms get involved in the trade and interchange relations with other firms outside the cluster. Cluster firms tend to operate as ‘competence packages’: they tend to create joint strategies and share resources that are obtained from the outside (cluster environment) (Navickas & Malakauskaitė 2009).
Strategic Choice & Joint Actions	Cluster SMEs are known for identifying common strategic objectives, agreeing on a joint development strategy and its systematic and coherent implementation (Karaev, Koh & Szamosi, 2007). Other cluster firms are perceived as a tool to actualize the interests of the dominating firm (Navickas & Malakauskaitė 2009). Cluster SMEs benefit from deliberate cooperation in joint actions (Schmitz , 1999; Schmitz & Nadvi , 1999).
Knowledge spillover and Learning	Clusters may help generate a pool of specialized workers(Gudda, Bwisa & Kihoro, 2014). In addition, firms in clusters learn from their partners’ experience (Navickas & Malakauskaitė 2009) either formally or informally as the firms exchange of ideas and knowledge is intensified (Karaev, Koh & Szamosi, 2007). Thus, they can advance in technical, financial, R&D, marketing and other fields of competence i.e. their <i>capacity to innovate</i> (Tang & Murphy, 2012)
Increased Specialization	A cluster facilitates association of firms belonging to different components of a value chain (suppliers and buyers). It enables smaller firms to get specialized (Carpinetti, Galda´mez & Gerolamo2008) and promotes their

	cooperation (Najib & Kiminami, 2011; Navickas & Malakauskaitė 2009).
Increased Rivalry	Rivalry spurs SMEs to proactively search for new ideas, knowledge and technology that drive innovations in the clusters (Dibrell, Davis & Craig, 2008). By being competitively aggressive, the SMEs do improve their innovativeness (Gudda, Bwisa, & Kihoro, 2014), production efficiency and competitive potential (Navickas & Malakauskaitė 2009)..
Easy access & fast Information Transfer	Easy access & fast information transfer stems from the close cooperation of firms (Karaev, Koh & Szamosi, 2007), strong relationship among them and highly competitive nature of a cluster (Najib & Kiminami, 2011; Navickas & Malakauskaitė 2009).
Accessibility of External Resources	Cluster firms have the possibility of obtaining external resources : infrastructure (Gudda, Bwisa & Kihoro, 2014; Schmitz, 1999),and the increased capacity to share internal resources of particular firms (Navickas & Malakauskaitė 2009).
Local social capital	Common social identity is based on shared norms or common notions of community that lie in ethnic, religious, regional or cultural identities. This can result in local social capital (Carpinetti, Galda´mez & Gerolamo, 2008) that strengthens cluster ties, fosters trust (Karaev, Koh & Szamosi, 2007) between local actors and promotes local cooperation and support (Boja, 2011).
Product and market innovation	Clusters facilitate the spread of new ideas and the capacity to innovate (Gudda, 2015), and bring novel-new & unique products to either existing or hitherto inaccessible distant markets (Gudda, Bwisa & Kihoro, 2014; Ali, Krapfel & LaBahn (1995; Hilmi & Ramayah, 2008; Salavour and Avlonitis, 2008).
Product innovativeness	Launching unique and innovative products is achieved through collaborating with competitors. This enables firms to ascertain their competitors’ technological levels. Firms which are more knowledgeable about their competitors’ technology strategies are better able to differentiate their products and therefore sustain their competitive edge (Gudda, Bwisa & Kihoro, 2014: BwiLoof & Heshmati, 2002; Porter, 1990).

here is strong evidence to suggest that a cluster-based policy brings additional positive effect to existing SME policy in industrialized economies, but the positive effect has not been extensively

researched in developing (transition) countries, particularly from the point of view of the SMEs, which are the main accelerators in the cluster development process, with regard to whether their product innovation has improved as a result of cluster effects (Karaev *et al.* 2007). Benefits of cluster initiatives for SMEs can be wiped out suddenly by political turmoil, macroeconomic changes and international economic crises, but in general they create a positive environment for innovative product initiatives, productivity, creation of sustainable new jobs and businesses and thereby enhance manufacturing SME sector competitiveness.

#### **4.0 Conclusions**

First, manufacturing SMEs tend to cooperate in order to achieve the effect of synergy in various fields of operation and improve their product innovativeness in the competitive market. The forms of cooperation in the clusters range from informal partnerships and alliances to networks, associations, as well as technological platforms.

Second, clustering does improve cluster SMEs' efficiency and effectiveness. In addition it facilitates learning, allows an exchange of knowledge and ideas through direct contact and free movement of labour; knowledge spillover also imposes on firms a high pace of EO, innovativeness and higher productivity.

Third, clustering can be seen as a product innovativeness improvement tool, which is critical in enhancing competitiveness in the local, national and global markets. Clustering policies can therefore lead to economic and social development, generating sustainable new jobs and alleviating poverty.

Lastly, SMEs that participate in clusters can benefit from specialized infrastructure, increased possibilities of penetrating new markets, skilled workforce, gain the ability to meet the unmet clients' needs and achieve economies of scale, and hence cost reduction in manufacturing operations.

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