

Strategies for Entrepreneurship and Market Innovation by KIBS in Developing Economies

Dr. Mercy Modupe Adeyeye

Senior Lecturer in Entrepreneurship and Business Studies, Department of Entrepreneurship and Business Studies, Federal University of Technology, P.M.B. 65, Minna, Niger State, Nigeria

Prof. Bamidele Adeboye Adepoju

Professor of Business Administration, Department of Business Administration, Bayero University, Kano State, Nigeria

Abstract

Knowledge-Intensive Business Services (KIBS) is the fastest growing sector globally with the focus on market innovation but lacks empirical research in developing economies. Thus, this paper investigates the strategies for entrepreneurship and market innovation by Knowledge-Intensive Business Services in developing economies. A framework is built in which KIBS small and medium sized enterprises (SMEs) employ radical innovation or market pioneering strategy for market innovation through knowledge acquired from the formal and informal institutions. Four hypotheses are developed and tested. Data is collected from 510 SMEs in KIBS sector of Lagos at firm level and analyzed. The results suggest that the main strategy for market innovation is market pioneering and the knowledge is acquired from informal institutions. The findings could assist in formulating policy agendas for promoting market innovation by KIBS SMEs in developing economies. It is recommended that the informal institutions be recognized as a significant part of institutional system for innovation in developing economies.

Keywords: Institutions, new market innovation, developing economies, SMEs, Knowledge-Intensive Business Services (KIBS).

1.0 INTRODUCTION

Scholars have referred to opening of new market as a type of innovation but limited attention and emphasis is being given to it in comparison to product and process innovations (Liebermann & Montgomery, 1988). Moreover, the few available studies are mainly on USA, UK and Europe until recently when some researchers began to give attention to developing economies (Egbetokun, 2011). Firms attract resources for innovations as entrepreneurial activity and growth strategy but it was discovered that the existing research on Market Innovation (MI) (Lieberman & Montgomery, 1988; Feeser & Willard, 1990) are on large firms with few on SMEs which are conducted in developed economies context. There is no research on knowledge-based industries and strategies employed for MI in developing economies including Nigeria. However, the present global economic crisis has diverted more researchers' interest to developing economies especially with the prospects and dynamism arising in countries like China, India (Smith, 2002), Nigeria and so on.

Researchers (Schumpeter, 1996) argue that entrepreneurship and innovation is the primary reason for the existence of knowledge-based firms. The idea of Knowledge-Intensive Business Service (KIBS) firms originated from Miles et al. (1995) to describe private firms that generate, collect, analyze and distribute knowledge with the purpose of providing customized proficient service solutions to issues that client firms are unable and unwilling to develop (Brown & Roundtree, 2002). KIBS emerge as a powerful sector whose importance is rising in many economies since the 1980s. It currently represents over 60% of the Gross National Income (GNI) in most developed countries with lower percentage in developing economies but a dynamic factor in manufacturing and human resources industries performance in many countries (Hazdra, 2010). However, the recent report about knowledge economy states that more than 20% of UK Gross Domestic Product (GDP) is KIBS and comfortably the largest singularly growing sector of UK economy (Sissons, 2011). This development is similarly experienced in developing economies. For instance, KIBS contributes 40% to GDP in Uganda; 50% in Zambia; over 60% in Korea and Brazil while in Nigeria, it contributes about 30% to GDP (ILEAP, 2009). Its entrepreneurial nature attracts researchers' attention.

However, the starting point of this study is the Schumpeter's theory of entrepreneurship with a focus on the 'innovation' concept (Schumpeter, 1996) in KIBS firms. Schumpeter, nevertheless, considers the entrepreneurial innovation as new combinations that includes introduction of a new product, a new process, opening of new market, development of new sources of raw materials, and a new form of organization as the propeller of the capitalist system (Schumpeter, 1934). Entrepreneurship and innovation are inseparable concepts, though Shane and Venkataraman (2000) attempt describing entrepreneurship basically as the conversion of opportunity that is discovered and exploited to a commercial process. The exploitation of new ideas for business purpose is innovation (Shane & Venkataraman, 2000). Schumpeter (1996) perceive a healthy economy as one that 'experiences continual disruption by technological innovation, producing 50 year cycles of economic

activity' (Burns, 2001:51). He further argues that each of the cycles was distinctive and the upswing in a cycle begins at new innovations arrivals that result into clusters of industries like KIBS. Thus the recent crave for a knowledge-based economy in developing economies becomes an opportunity being exploited by the KIBS industries in Nigeria.

All innovation generally depends on the possibility of a market where it can be converted to economic rent whether in an existing market or by creating a market where none existed (Mitra, 2012). Schumpeter did not also singularly explore the strategies for market innovation and the source of knowledge for market innovation (Akoni, 2011). This made knowledge and theories about market innovation to be lacking in the literature (Tidd & Bessant, 2009).

An appeal is made in this paper to the institutional theory as it emerges in the literature of entrepreneurship (e.g. Ahlstrom & Bruton, 2002; Peng, Wang & Jiang, 2008) to provide a single theoretically consistent framework that answers the questions about the source of knowledge for market innovation. It can be assumed that for any entrepreneurial activity, the institutions within the context have a great role to play especially in terms of sources of knowledge for strategies to implement innovation. The institutional setting of the formal and informal institution of the developing economies is different and more dominant than that of the developed economy (Acs & Virgill, 2009) but little is known about the institution that promotes innovative strategies since the two institutions run in tandem. Nevertheless, Nakamura (2000) emphasizes the importance of enabling institutions in making innovative activities thrive especially in the marketplace.

The main strategies for market innovation in all economies are either a radical innovation (RI) (Christensen, 1997) or Market Pioneering (MP) (Liebermann, 1998). They are predictor of survival in market innovation (MI) which is basically driven by geographical expansion into market (Klepper & Thompson, 2006; Sutton, 1998). This is crucial in explaining different empirical facts about innovative strategies. KIBS firms' usually employ any of these two strategies for its MI.

The market is the bridge that connects the societal needs and economic pattern of response to innovation (Christensen, 1997). Wong et al., (2005) consider market innovation as the introduction of any new economic activities to the market place, by an established firm entering into a new or existing market or industry through imitation of product/service or innovation. Innovation in this context is not just about serving mature and established markets but essentially the opening of new market (Tidd & Bessant, 2009). Thus, Shane and Venkataraman (2000) claim that entrepreneurship's attention to wealth creation centers on discovering new and emerging opportunities in the marketplace, while Kuratko and Hodgetts (2008) support the notion that innovation comes from a conscious and purposeful search for new opportunities in different ways to penetrate into the markets. An emphasis therefore is placed on the need to enter a market place since the market is the end-result for both buyers and sellers.

The main objective of this paper therefore, is to investigate the strategies for entrepreneurship and market innovation by Knowledge-Intensive Business Services (KIBS) in developing economies. A framework is developed to show the strategies for market innovation. The study is considered at the local context of Lagos, Nigeria. The rationale for choosing Lagos is because it has the highest concentration of financial and educational institutions in Nigeria (Uzowanne, 2011), thereby making it more suitable for addressing the research problem of this study. The prior argument has established that the time is ripe for such a study to investigate the strategies for market innovation by KIBS SMEs in developing economies so that the findings can be generalized to cities with similar features like Lagos in other developing countries.

The quantitative approach is adopted for data collection from 510 SMEs in KIBS sector of Lagos, Nigeria at firm level. This paper will hopefully contribute to the literature on market innovation (Feaser and Willard, 1990; Lieberman and Montgomery, 1988; Schumpeter, 1934) and institutional perspective of entrepreneurship in developing countries (Baumol, 1993; Sautet, 2005) by providing a better understanding of the strategies of the formal (FI) and informal institutional (InFI) sources of knowledge that are related to market innovation by KIBS SMEs in developing economies. The paper is organized into sections as follows. In sections 2 and 3, the research objectives and literature review and theoretical basis are stated. Section 4 discusses the empirical results; section 5 presents the discussion and conclusion.

2.0 RESEARCH OBJECTIVES

The main objective of this paper is to investigate the strategies employed for entrepreneurship and market innovation by KIBS in developing economies. This objective will be achieved by answering the following research questions: Is there a relationship between the use of formal and informal knowledge institutions and radical innovation for market innovation by KIBS SMEs in developing economies? To what extent is the relationship between the use of formal and informal knowledge institutions and market pioneering for market innovation by KIBS SMEs in developing economies?

3.0 LITERATURE REVIEW AND THEORETICAL BASIS

3.1 Market Innovation (MI)

Market innovation is important in developing economies (Acs&Virgill, 2009) as most of their innovations are mere transfer of innovations from developed countries into another market (Eurostat/OECD, 2005). For instance, in Kenya and Nigeria, “re-pats” (returning emigrants) are discovering new opportunities (entrepreneurial) in their home countries and returning in considerable numbers as social entrepreneurs and entrepreneurs to contribute to telecommunications, financial services and other services (Uzowanne, 2011) which are KIBS. This fact confirms the relevance of this study on strategies for entrepreneurship and MI in the developing economies context at this time.

Market innovation is described as an innovation (Klepper & Thompson, 2006) that fosters market creation because it creates opportunities for entrepreneurs to operate (Acs&Virgill, 2009). The Oslo manual (2005) differentiates it from other types of innovation by its main objective to increase the volumes of sales which consequently affects profitability. It is a unique innovation in its capacity to facilitate expansion into other geographic areas of the economy. According to some authors (e.g. Feeser & Willard, 1990; Klepper & Thompson, 2006), it enables SMEs to capture new market share, increase the firm’s size and boost profitability (Feeser & Willard, 1990; Klepper & Thompson, 2006). MI is a significant form of innovation because the commercialization of any application takes place in the market for profitability (Mitra, 2012). The actions necessary for such outcomes includes strategies like market pioneering and radical innovation which are directed at understanding and undertaking the process of market innovation.

Market innovation is critical to entrepreneurship; therefore KIBS SMEs need to expand from one place to another. They must introduce their services to any existing market, or new group of users or create a new market where none exists thereby satisfying unfulfilled needs of the community for a knowledge society. KIBS sector has become very notable in this millennium and they use the Small and Medium sized Enterprises (SMEs) as main actors since SMEs are often perceived as an ‘engine of innovation’.

A frame work is developed to explain the strategies employed for MI in developing economies and that KIBS SMEs derived knowledge for MI from two strategic sources: Formal Institution (FI) and Informal Institution (InFi) to use either Radical Innovation (RI) or Market Pioneering (MP) for the Market Innovation (MI) (see figure 1 below).

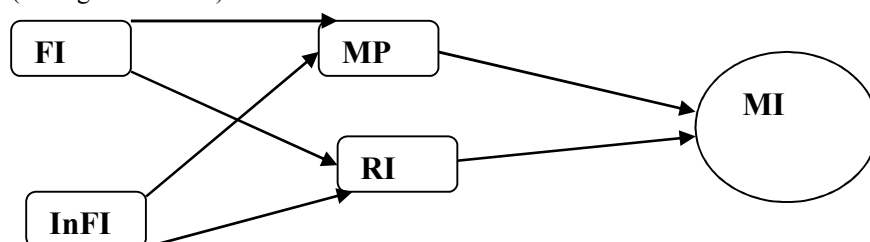


Figure 1: Framework for Strategies for New Market Innovation

Source: Developed by Adeyeye (2014)

3.2 Market Pioneering (MP)

Market pioneering is a strategy for MI whereby firms enter a market as the first to exploit opportunities in an existing or non-existing market, in a way that thwarts other firms’ attempts to compete in that market (Lieberman & Montgomery, 1988). It is the exploration of the early-entry strategy by a firm as the first to exploit opportunities in an existing or non-existing market to gain the first-mover advantages in order to meet customers’ need, increase market share and make positive economic profit (Mitchel & Skrzpacz, 2011). Previous research showed that the first product/service to be introduced in a market receives an unalloyed attention in the customer’s mind (Lieberman & Montgomery, 1988). Moreover, Song et al. (1999) posit that pioneering firms stand to gain many advantages. They are able to capitalize on economies of scale and scope, establish leadership status among customers, capture the best perceptual points or distribution outlets and gain a giant market share. Basically, SMEs may choose to be pioneers because such a strategy can bring profitability by creating a monopoly (barricaded entry) or a clever implementation to make imitation unprofitable for subsequent entries (Caves, 1984). Pioneering firm does not necessarily mean that all about innovation and business practice is rosy. There is the dark side of pioneering. First, it is really costly (Robinson et al. 1994) as late-movers free ride on first-movers investment because imitation costs less. Innovative and entrepreneurial firms like KIBS SMEs have the capability for MP with sustainable first-mover advantages.

3.3 Radical Innovation

Radical innovation is another strategy for new market innovation but disruptive in nature. It is the commercialization of products/technologies/service/method in such a way that the impact renders existing ones

obsolete and non-competitive in the market (Mitra, 2012). It is also a strategic approach on a product/service to fit a market niche in a new or existing un-served market by existing firms in the industry (Christensen, 1997; Tidd, Bessant, & Pavitt, 2005).

This implies that as consumers use the new product/service they abandon the former and shift over to the new probably because of equal or better value and cheaper price thereby causing disruption in both the market and economic system. For example, the market for mini-computers and main frames was disrupted when consumers shifted to personal computers market (Christensen, 1997a). However, Baiyere, Haken, Westgeet, & Ratingen (2011) in their study argue that disruptive innovation strategies should be context-dependent. KIBS involvement in specialized services in developing economies as against the general service firms makes its' impact to be the same as in the developed economies. Radical innovation is often a product of R&D and is often protected by Intellectual property rights (trademarks, plant patent, design patent, copyright law and others) (Maurer, Hugenholz, & Onsrud, 2001). A new product or service gains a foothold in the market only when there is a diffusion of similar products and the gradual evolution of dominant designs or technologies. Market and technological uncertainties may arise due to shifts in technology and changes in customers' perceptions or wants leading to 'creative destruction' (Schumpeter, 1934). Beyond any consideration of the advantages and disadvantages of innovativeness is the need to achieve and sustain a competitive position arising from radical innovation.

3.4 Formal and Informal Sources of Knowledge for MI

KIBS SMEs require knowledge in order to employ either the market pioneering or radical innovation strategy to enter (Svetina&Prodan, 2008) a new market. Firms can interact in various ways to access knowledge and mechanisms outside their boundaries in the institutions to enable acquisition, dissemination and production of knowledge (Muller & Doloreux, 2009). Institutions are governance mechanisms that regulate the way things are done in an economy. They can foster and also constrain the exploitation of opportunities in such environment. Institutions in the developing economies are often formal and informal in nature (Zenger, Lazzarini & Poppo, 2002). This polarisation of institutions in developing economies is strategic in nature as it gives recognition to every positive player in the society.

Formal institutions are officially regulated with legal backing while informal institutions are privately operated in accordance to the norm of the people. It is acknowledged (Svetina & Prodan, 2008) that the more KIBS SMEs access external sources of knowledge, the more resources are available for expertise disposal to enter a market and the more they can innovate. Consequently, the more they will be able to meet up with the speed and increased development of ICT as it affects a knowledge economy. Moreover, it will afford opportunity to meet the increased need of professionals for the dynamic change in the global KIBS industry and also complement firms' internal resources for MI. The formal institutions sources include Universities, research institutes, external research and development, conferences, workshops and seminars; networking (inter-firm collaborations and alliances); partnership with academic institutions, business associations (den Hertog, 2000; Muller & Doloreux, 2007) and so on. These sources are strategic for knowledge acquisition to discover whether RI or MP will be the option for MI. The informal institutional sources include the information gathered from lead clients, suppliers of equipment and materials, network of friends, families and others, personal contact by questioning and administering questionnaires, interactions at parks, markets, clubs, bus stops and other public places, the Internet and literature (Pedersen et al, 2002; Svetina&Prodan, 2008). These players are willing to invest necessary information in the entrepreneur for MI. These are basically the forms of knowledge acquired by trust. Both formal and informal knowledge institutions are available for the KIBS firms to obtain adequate knowledge required for efficient and effective MP or RI for MI in developing economies. Hence the following null hypotheses were formulated:

Ho1: There is no significant relationship between the use of formal sources of knowledge acquisition and Radical Innovation for Market Innovation by KIBS SMEs in developing economies.

Ho2: There is no significant relationship between the use of informal sources of knowledge acquisition and Radical Innovation for Market Innovation by KIBS SMEs in developing economies.

Ho3: There is no significant relationship between the use of formal sources of knowledge acquisition and Market Pioneering for Market Innovation by KIBS SMEs in developing economies.

Ho4: There is no significant relationship between the use of informal sources of knowledge acquisition and Market Pioneering for New Market Innovation by KIBS SMEs in developing economies.

4.0 RESEARCH METHODOLOGY AND DATA SOURCE

This study seeks to investigate the strategies employed for entrepreneurship and market innovation by KIBS in developing economies by finding the relationship between formal and informal institutions and the strategies for market innovation. It therefore employed the quantitative research design which is mainly based on statistical summary and analysis. Lagos was the study area. It has the highest concentration of businesses, industries and higher educational institutions in Nigeria which made it most relevant in addressing the research problem of this study (Uzowanne, 2011). For instance, there is the 'computer village' at Ikeja that is made up of clusters of all

forms of ICT related products, general services and KIBS SMEs (Uzonwanne, 2011). It is a renowned market patronized nationally and internationally (Uzonwanne, 2011) by Europeans, Asians and Africans. A survey was carried out with a self-administered questionnaire. There were three questions with 22 items to collect data on strategies for MI during the period 2006-2011. Attention was particularly given to information relating to formal and informal sources of knowledge that enabled MI through RI and MP. A ten-point likert-scale with close-ended questions was used except for the demographic section. Each item has five responses in which respondents have to indicate: (0) Not Applicable, (1) 'Not Important at all' to (5) 'Very Important'. The highest is five while the lowest is zero points respectively. Respondents were to rate the sources in order of importance for MI.

4.1 Sampling

The population frame for the study is all registered KIBS SMEs in Lagos constructed from Nigerian Yellow Pages (2011) and Nigeria Search Engine (2011) which are the commonly used business directories in Nigeria. The population frame consisted of 510 KIBS SMEs falling into the category of KIBS SMEs with less than 250 employees to ensure they are not corporate organizations. They must be registered and located in Lagos, and of 20 years and below (Lindholm, 1999; Sæmundsson, 2003) to guarantee being KIBS SMEs with reasonably high innovative behaviours.

The census-based method was adopted to enable all the samples to be involved in the survey in order to have a robust result. There were 510 respondents that accounted for 100% of the sample at the end of the analysis. The empirical research was carried out in two ways: a pilot study using test-re-test and the main survey on strategies for market innovation by KIBS SMEs. The samples were mainly from KIBS SMEs thus making the measures relevant for this study. The result is based on maximum level of risk that is usually taken in social science research as $p < 0.5$ level (Bryman & Bell, 2011). The descriptive analysis, factor analysis, correlation table and linear regression analysis was carried out to test the hypotheses.

5.0 THE EMPIRICAL RESULTS

The results of this study are presented in this section.

5.1 The Dependent Variable: *Market Innovation*

To measure market innovation, respondents were asked to indicate the numbers of new markets they opened (see table 1 below).

Table 1: Measurement Indices for New Market Innovation

Number of new places in Nigeria has your company expanded to carry out project/ have branches?
Number of new places in outside Nigeria has your company expanded to carry out project/ have branches?
Number of new customers who have not been using your services/product in Nigeria has your company introduced and they accepted.
Number of new customers who have not been using your services/product outside Nigeria has your company introduced and they accepted.

This was considered a useful measure of market innovation. Variable taking the value of '1' was used, if it applied and '0', if not applicable. Firms with not applicable (N/A) in any year are rated '0' while those with number(s) of new markets scored '1'.

5.2 Independent Variables

5.2.1 Market Pioneering (MP)

Liebermann and Montgomery (1998) argue that newness of a product/ service is a significant variable to gain acceptance in marketplace. Hence for the purpose of elaborations and enhancement, 7 items were employed to describe 'newness' in terms of market innovation at the pioneering status as commonly used in a number of innovation studies (Johannessen, Olsen, & Lumpkin, 2001; Mueller, Titus, Covin, & Slevin, 2009) as a measure of innovative activities (Johannesson et al., 2001; Abubakar, 2009). Factor analysis was carried out to eliminate possible multicollinearity and reliability test was done (see table 2 below).

Table 2: Factor Analysis Result on Market Pioneering

Factor 1: Newness as Market Pioneers	
Newly introduced to the country	0.80
Newly introduced to the firm	0.81
Newly introduced to the market	0.77
New to a group of people as customers /client firm	0.83
Newly introduced to the environment	0.60
Improved version of a previous product/service	0.71
Presented in a different ways from other firms	0.72
<i>Explained variance by the factor: 56.9% KMO.83 Chronbac alpha .86</i>	

KIBS SMEs can score ‘0’ or a maximum score of ‘7’. Thus, no matter the level of ‘newness’ as long as it is first introduced to the market it takes the value “1”. An item that takes the value of “1” was used, if the items applied and “0”, if not applicable.

5.2.2 Radical Innovation

Radical innovation was identified by six items commonly used to measure the Intellectual Property Rights (IPRs). Factor analysis was carried out to eliminate possible multicollinearity and reliability test was done (see table 3 below).

Table 3: Factor Analysis Result on Radical Innovation

Factor 1: Radical Innovation	
Plant Patent	0.78
Design Patent	0.94
Copyright	0.92
Trademark	0.94
TRIP (Trade Related Aspects of Intellectual Property)	0.94
Secrecy	0.36
<i>Explained variance by the factor: 95% KMO .61 Chronbac alpha .74</i>	

KIBS SMEs can score ‘0’ or a maximum score of ‘6’. Radical innovation can be disruptive as they offer something new to the world and replaces existing ones (Christenson, 1997). Thus, it takes the value ‘1’ if a firm has trademarks, plant patents or design patents or copyright that protect databases under copyright law (Maurer et al., 2001), or Trade Related Aspects of Intellectual Property Rights (TRIPS) or Secrecy as enforced by labour or contract laws (Levin et al., 1987), and ‘0’, if not applicable.

5.2.3 Formal and Informal Sources of Knowledge for MI

A construct “external sources of knowledge” was designed with 19 measures in the questionnaire taken directly from Svetina&Prodan (2008) but classified into formal and informal institutions (see table 4 below).

Table 4: Factor Analysis Result for Formal and informal sources of knowledge resources

<u>Factor 1. 1: Formal Sources of Knowledge</u>	
R&D outside the firm	.77
Partnership /collaboration with other firms (National)	.84
Partnership /collaboration with other firms (International)	.79
Interaction with public institutions - Universities and research institute	.74
Conferences, workshops and seminars in Nigeria	.71
Conferences, workshop and seminars outside Nigeria	.77
From industry association and trade unions	.72
<i>Explained 58.3% of the variance (KMO.85; Chronbac alpha .88)</i>	
<u>Factor 2. 1: Learning through Personal Contacts</u>	
Personal connections to known people	.82
Personal contact by asking questions, investigations or survey	.81
Knowledge from informants	.84
Personal invitation to come over	.78
Interactions with suppliers	.64
<i>Explained 47.11% of the variance (KMO.87; Chronbac alpha .88)</i>	
<u>Factor 2 .2: Learning from local linkages</u>	
Information from friends and family members	.62
Imitation of other competitors	.85
Connections from towns meeting	.87
<i>Explained 13.14% of the variance (KMO.87; Chronbac alpha .76)</i>	
<u>Factor 2. 3: Learning through Public places and Literature</u>	
Literature	.86
Webs & Internet	.86
Interactions at public places like bus stops, market, church, mosques, parks, clubs etc	.50
Interactions with customers/client firms	.56
<i>Explained 9.31% of the variance (KMO.87; Chronbac alpha .83)</i>	

There were nine question items for formal sources of resources with minimum score as '0' and maximum '9'. There were 10 question items for informal sources of resources with minimum score as '0' and maximum '10'. 3 factors emerged under the informal sources of knowledge resources: The first factor is 'learning from personal contacts' (Den Hertog, 2000) which explains 47.11% as it represents personal interactions with known people, informants, suppliers, clients, enquiry or survey. The reliability score is .88. The second factor could be interpreted as 'learning from local linkages' (Svetina&Prodan, 2008) which explains 13.14% with Chronbac alpha .76. This factor mainly relates to KIBS SMEs' learning through networking, collaborations and collective reflections of families, local friends, town mates and imitations of other local competitors which are necessarily not explicit and cost involving. The last factor represents 'learning through public places and literature' (Den Hertog, 2000) 9.31% with .88 reliability coefficients accounts for KIBS SMEs knowledge from interactions at parks, markets, clubs, bus stops and others, the Internet and literature.

5.2.4 The Control Variables

MI depends on various factors. In this study, the firm's age and size as commonly used in previous authoritative studies (example, Muller et al, 2009) are to be kept constant in order to reduce probable distortion of the estimated outcomes. Thus, a regression analysis was performed (see table 5 for details).

Table 5: Regression results of knowledge sources of resources for RI and MP

	RIModel	MPModel
Constant	-6.020E17	-.104 (-1.290)
Formal sources of knowledge resources	.276 (4.566) ***	.274 (4.508)*
Informal –Personal Contact	.156 (3.450)	.159 (3.525) ***
– local linkages	.093 (1.951)*	.101 (2.135)**
--Public places and literatures	.229 (1.863)	.235 (4.900) ***
Controls		
Age	.047 (1.233)	.015 (.368)
Size	.104 (1.624) *	.104 (2.624) **
R ²	.382	.394
Adjusted R ²	.396	.386
F	39.589***	44.884***

Note: ***, **, * denotes significance at 1%, 5% and 10% respectively. Values of the t-statistics are indicated in parentheses. The sample size used for calculations is 510 KIBS SMEs. Reference categories for control variables are age 1-20yrs and size (average numbers of employees in 2006-2011).

The overall results show a correlation coefficient of 38.2% and 39.4% respectively for RI and MP. It shows that there is a relationship between the formal and informal sources of knowledge and the strategies for Market innovation. Furthermore, the findings reveal that 54 of KIBS SMEs (10.6%) respondents use the radical innovation strategy for MI while 458 (89.4%) use MP strategy for MI. The regression analysis result shows that radical innovation explains 39.6% of the model and significant at $P < .01$. The 54 respondents that used radical innovation strategy for the MI basically employ the internal R&D with collaborations with other firms from the formal institutions. The informal institutional model is insignificant. Thus, the null hypothesis Ho1 is rejected hence there is a significant relationship between the use of the formal sources of knowledge acquisition and RI strategy for MI by KIBS SMEs in Nigeria while Ho2 is accepted that there is no significant relationship between the use of the informal sources of knowledge acquisition and RI strategy for MI by KIBS SMEs in Nigeria.

Moreover, the regression analysis also reveals that the MP explains 38.6% of the model and the informal institutions are significant at $P < .05$. Thus, the null hypothesis Ho3 is accepted that there is no significant relationship between the use of the formal sources of knowledge acquisition and MP strategy for MI by KIBS SMEs in Nigeria while Ho4 is rejected, hence there is a significant relationship between the use of the informal sources of knowledge acquisition and MP strategy for MI by KIBS SMEs in Nigeria. The informal institutions as a source of MI knowledge acquisition are highly associated with MP strategy. Whilst controlling for firms' age and size the firm's age is insignificant while size is significant at $P < .01$ and $.5$ respectively for RI and MP. This indicates that firm's age has no effect on use of knowledge resources from both formal and informal institutions for RI and MP. This stresses that irrespective of the size of the firm, the formal institutions are strategic to radical innovation in knowledge acquisition for MI. However, the size of KIBS SMEs is significant in learning from informal sources (such as networking through personal contact, local linkages and public places and literature are significant (at .01, .05 and .10 respectively) for MP strategy. This implies that the informal institutions are very significant sources of knowledge acquisition for MP by KIBS SMEs in Lagos irrespective of the firm's age.

Discussion and Conclusion

The recent development of KIBS firms requires a research to ascertain the relationship between the formal and informal institutions in developing economies and the strategies for market innovation. Four null hypotheses were developed and tested. Two of them were accepted while two were rejected. The overall finding reveals that the formal and informal institutions are significantly related to the strategies for market innovation. This is similar to previous studies (examples, Cohen & Levinthal, 1989; Pedersen et al, 2002; Svetina & Prodan, 2008) that the use of external knowledge resources is associated with knowledge acquisition for innovation. It supports the use of external sources of resources by entrepreneurship to enhance firm performance and innovative activities. However, previous studies do not examine which of the external knowledge institutions, whether it is the formal or informal that could possibly be the main source of these resources.

Furthermore, only 10.6% of the sample uses the RI strategy for MI from knowledge acquired from the

formal sources. That is, knowledge acquired from universities, research institutes and other knowledge institutions that are dynamically engaged in research, acquisition and dissemination of knowledge for innovation in the business environment are very essential for MI strategies. It indicates that RI is not the main strategy for MI in Nigeria. This contradicts Abubakar (2009) Kuratko and Hodgett (2008) finding from the developed economies that this age of technology and the knowledge-based economy, most economy employs the radical innovation strategy for competitive advantage in the 21st century. This is probably because of the low technological development in most developing economies as most of their innovations are mere transfer of innovations from developed countries into another market (Eurostat/OECD, 2005). Knowledge staff in KIBS SMEs are resourceful, independent and highly skilled enough to influence and design necessary instruments (Kefela, 2010) needed to obtain knowledge resources for MI. It therefore suggests the need for the country to strengthen the educational base from the basic level to the higher end along the lines of technological innovation (Scramm, 2004) to meet the challenge for radical innovation by KIBS SMEs' in this contemporary knowledge economy.

Also, 89.4% of the sample uses the MP strategy for MI from knowledge acquired from the informal sources, highly significant ($P < .01$) with or without controlling for size and age of firms. That is, the uses of the informal sources of knowledge acquisition are positively associated with MP strategy in Nigeria. The informal sources of NMI knowledge acquisition in terms of learning through personal contact, local linkages and public places and literature are significant. This indicates that the use of personal contact as a sort of network to access knowledge as well as information from public places and literatures are very important for MP in Lagos. These may be as a result of some complex non-market factor in developing economies (Ayeetey, 1998) where the informal network becomes vital due to some environmental interactions.

Furthermore, Lagos infrastructural development formally and informally has an impact on firms' in the city for KIBS SMEs to exploit for MP. The reason for this might possibly be because networks are important in overcoming some information failures associated with MP in Lagos (Scramm, 2004). Also, the peculiarity of Lagos as a result of the complicated non-market social, cultural communal background and environmental interface facilitates the usefulness (Aryeetey, 1998; EfnA, 2011) of informal sources. Thus, in answering the research questions, it could be stated that there is a relationship between the use of informal sources of knowledge acquisition in Lagos. The more knowledge acquired from the informal sources of knowledge, the more the ability to pioneer markets and the more of MI. They use less of the formal knowledge institutions for MP, probably because of its seemingly availability to every firm that can collaborate and firms that are also able to pay the financial costs of knowledge. Aside, the formal knowledge institutions lack regular funding, hence the firms in question need to sponsor the R&D upfront more often in order to acquire the required knowledge. In contrast, the informal knowledge institution sources are available only to those who are connected to the source and have the capacity to exploit and filter the needed information for MI. On the other hand, the radical innovation strategy for MI sticks to the use of the formal sources of knowledge acquisition because of the prospects involved in possessing the intellectual asset in the market.

It also suggests that both formal and informal sources are important but informal sources are more crucial sources of knowledge acquisition for MP in Lagos during the research period. The informal institutions emerged as primary sources of resources for KIBS SMEs in Lagos with MP strategy while formal institutions emerged as the only source for radical innovation strategy.

In answering the research questions, it is found that there is a relationship between the use of formal knowledge institutions and radical innovation for market innovation by KIBS SMEs in developing economies. Also, there is a relationship between the use of informal knowledge institutions and market pioneering for market innovation by KIBS SMEs in developing economies. However, both formal and informal institutions are strategic sources of knowledge for MI in Nigeria but market pioneering is the main strategy. The result suggests that most KIBS SMEs employed the MP strategy rather than radical innovation (RI).

The unique contribution of this research is that the formal institutions are strategic for RI while the informal institutions are strategic sources of knowledge acquisition for KIBS SMEs. For instance, Scarso & Bolisani (2012) state that KIBS SMEs offer valuable elements of technical and application knowledge to clients while clients also supply knowledge exchange ingredients for designing a successful KIBS solution for MI. Thus, in Lagos, the use of networks through personal contact (with clients, suppliers etc.) and information gathering from public places like parks, mosques, churches, tribal meetings, literature and the Internet are highly strategic and significant for MP.

This study has contributed to the few literatures in entrepreneurship in the developing economy by investigating the strategies for entrepreneurship and market innovation by KIBS SMEs in developing economies. It has introduced a distinctive institutional perspective of formal and informal institutional strategy that is different from the developed economies context for MI. The study has shown that the KIBS SMEs are more disposed to the use of the informal institutions thereby serving them as the primary source of knowledge acquisition for MP. This study also contributes to knowledge in market innovation and institutional theory of entrepreneurship in developing economies that MP is more strategic to MI in Nigeria than RI. Thus the informal knowledge sources

are significant to KIBS SMEs in acquiring knowledge for MP. The results of this survey are based on a fairly large sample and so, it will contribute to the body of empirical studies on entrepreneurship in developing economies (Lingelbach, 2007; Obamuyi, 2007; Otto & Ukpere, 2011). This paper contributes to the growing body of literature generally in entrepreneurship (market innovation perspective) and entrepreneurship in developing economies (institutional perspective), by providing a better understanding on the strategies for entrepreneurship and market innovation through the formal and informal institutional sources of knowledge by KIBS SMEs in developing economies. The findings of this study could assist in formulating policy agendas for promoting market innovation, based on the use of knowledge acquired from the formal and informal sources by KIBS SMEs in developing economies.

Furthermore, the informal sources seem more strategic in supporting the needs of KIBS SMEs for market innovation. They serve as the major source of acquiring knowledge for market information. Thus, it is recommended that the informal system should be given recognition by the federal government of Nigeria as a significant part of the institutional system that has impact on innovation in developing economies. The informal system should not be perceived as an agent of necessity but should be promoted as an important part of the economic system in the developing economies. Necessary structure and support should be given to the informal institutions as they are becoming a focal point in the developing economies. Moreover, practitioners should explore the valuable insight to identify and exploit the strategies of the formal and informal knowledge institutions for market innovation inside and outside the developing economies. Finance should be made available to universities and research institutes and other formal knowledge institutions to enable them perform their function of R&D. This will foster KIBS firms in acquiring necessary information to execute their strategy of choice, whether the radical innovation strategy or market pioneering strategy for MI employment, profitability and improve the standard of living of prospective clients in the new market environment.

The scope of the study is specifically designed for KIBS sectors; therefore the results may not be completely applicable for all service sectors. This study has opened up relatively unexplored segments and would serve as a basis for future research which could be beneficial to potential researchers, policy makers and prospective innovative firms/ practitioners by replicating this study in other developing countries to see whether similar findings will emerge.

References

- Abubakar, Y. A. (2009). *Agglomeration of high-tech firms and new product development: A comparative study of high & low agglomeration regions*, unpublished thesis University of Essex.
- Ács, Z. J. & Virgill, N. (2009), *Entrepreneurship in developing countries*, Jena economic research papers.
- Ahlstrom, D., & Bruton, G. D. (2002), 'An institutional perspective on the role of culture in shaping strategic actions by technology-focused entrepreneurial firms in China', *Entrepreneurship Theory and Practice*, 26(4), 53-70.
- Akoni, O. (2011), The contribution of Lagos state cooperative movement to the economy. *Vanguard, Business*. June 29.
- Aryeetey, E. (1998), *Informal finance for private sector development in Africa*, African Development Bank Group.
- Baiyere, A., Haken, R., Westgeet, C., & Ratingen, R. (2011), Disruptive Innovation at the Bottom of the Pyramid, *Management of Knowledge and Innovation Course, Tilburg University. Unpublished*.
- Baumol, W. J. (1993), 'Formal entrepreneurship theory in economics: Existence and bounds', *Journal of Business Venturing*, 8, 197-210.
- Bryman, A., and Bell, E. (2011), *Business research methods*, London: Oxford University Press.
- Bryman, A., and Cramer, D. (2003), *Quantitative Data Analysis with SPSS Release 10 for Windows*. London: Routledge.
- Burns, P. 2001, *Entrepreneurship and small business*, Basingstoke: Palmgrave Macmillan.
- Caves, R. E. (1984), 'Multinational firms, competition and productivity in host-country markets', *Economics*, 41 176-193.
- Christensen, C. M. (1997)a, *The innovator's dilemma: when new technologies cause great firms to fail*: Harvard Business Press.
- Cohen, W. M. and Levinthal, D. A. 1989, 'Innovation and learning - the two faces of R & D', *Economic Journal*, 99(397) 569-596.
- Den Hertog, P. (2000), 'Knowledge-Intensive Business Services as co-producers of innovation', *International Journal of Innovation Management*, 4, 481-528.
- EFinA. (2011), Access to Finance Survey in Nigeria (2008): Key topline findings *Innovation in Lagos* (Vol. 7). Lagos: Lagos State Research institute.
- Egbetokun, A. A. (2011), *The Outcomes and the Drivers: Exploring how openness influences innovation in Developing Countries*, MPRA, available: [accessed April 13, (2011)].
- Feeser, H. R., and Willard, G. E. (1990), 'Founding strategy and performance: A comparison of high and low

- growth high tech firms', *Strategic Management Journal*, 11(2), 87-98.
- Hazdra, A. (2010), Service-dominant logic: Why, where, and what it means for innovation? *Current*, 21, 1-21.
- ILEAP. (2009), *Report of the Nigeria Services consideration workshop*. Paper presented at the NANTS in collaboration with ILEAP, Nugget International Hotel.
- Johannessen, J., Olsen, B., and Lumpkin, G. T. (2001), 'Innovation as newness: What is new, how new, and new to whom?', *European Journal of Innovation Management*, 4(1), 20-31.
- Kefela, G. T. (2010), 'Knowledge-based economy and society has become a vital commodity to countries', *International NGO Journal*, 5(7), 160-166.
- Klepper, S., and Thompson, P. (2006), 'Submarkets and evolution of market structure', *RAND Journal of Economics*, 37(4), 861-886.
- Kuratko, D. F., and Hodgetts, R. M. (2008), *Entrepreneurship: Theory, process, and practice*: South-Western Pub.
- Levin, R., Klevorick, A., Nelson, R. & Winter, S. (1987), Appropriating the returns from industrial research and development, *Brookings Papers on Economic Activity*. 3 783-831.
- Lieberman, M., and Montgomery, D. (1988), 'First-mover advantages', *Strategic Management Journal*, 9(1), 41-58.
- Lindholm, D. A. (1999), Technology-based SMEs in the Goteborg region: Their origin and interaction with universities and large firms, *Regional Studies* 33, 379-389.
- Lingelbach, D., Vina, I. and Asel, P. (2007), 'What's distinctive about growth-oriented entrepreneurship in developing economy?' *Social Science Electronic Journal*, available: [accessed 6th feb. (2010)].
- Maurer, S. M., Hugenholtz, P. B., and Onsrud, H. J. (2001), Europe's database experiment. *Science*, 294(7), 789-790.
- Miles, I., Kastrinos, N., Bilderbeek, R., and den Hertog, P. (1995), Knowledge- Intensive Business Services: Users, carriers and sources of innovation, *EIMS publications*, 15.
- Mitchel, M., and Skrzypacz, A. (2008), *A theory of market pioneers*, Paper presented at the The first Duke theory conference, Minnesota.
- Mitra, J. (2012), *Entrepreneurship, innovation and regional development*, London: Routledge.
- Muller, E., and Doloreux, D. (2009), What we should know about Knowledge- Intensive Business Services, *Technology in Society*, 31, 64-72.
- Nakamura, L. I. (2000), Economics and the new economy: The invisible hand meets creative destruction, *Federal Reserve Bank of Philadelphia Business Review*, 15.
- Nigeria Search Engine. (2011), *Nigeria Business Directory*, Lagos: Nigeria Galleria.
- Nigerian Yellow Pages. (2011), *Nigerian Yellow Pages Directory*, Lagos: Nigerian Yellow Pages.
- Pedersen, T., Christine, S., and Devinney, T. (2002), *The importance of internal knowledge sourcing in firm performance: A latent class estimation*, Working Paper, LINK conference, Australia.
- Otto, G. and Ukpere, W. (2011), 'Credit and thrift co-operatives in Nigeria: A potential source of capital formation and employment', *African Journal of Business Management*, 5(14) 5675-5680.
- Smith, K. (2002), *What is the 'Knowledge Economy'? Knowledge intensity and distributed knowledge bases*, UNU-INTECH discussion paper, The Netherlands: United Nations University, Institute for New Technologies, unpublished.
- Scarso, E. and Bolisani, E. (2010), 'Knowledge-Based Strategies for Knowledge-Intensive Business Services: a Multiple Case-study of Computer Service Companies', *Electronic Journal of Knowledge Management*, 8(1) 151-160.
- Robinson, W. T. (1994), 'First- mover advantages from pioneering new markets: A survey of empirical evidence', *Review of Industrial Organization*, 9 1-23.
- Romijn, H., and Albaladejo, M. (2002), 'Determinants of innovation capability in small electronics and software firms in South East England', *Research Policy*, 31, 1053-1067.
- Sæmundsson, R. J. (2003), *Entrepreneurship, technology and the growth process: A study of young, medium-sized technology-based firms*. PHD University of Technology, Chalmers.
- Sautet, F. (2005), 'The role of institutions in entrepreneurship: Implications for development policy', *Mercatus Policy Primer*(1).
- Schumpeter, J. A. (1934), *The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle*, Cambridge Mass: Harvard University Press.
- Schumpeter, J. A. (1996), *The theory of economic development*. New Jersey: Transaction publishers.
- Scramm, C. J. (2004), 'Building entrepreneurial economies'. *Foreign Affairs*, 83(4), 104-130.
- Shane, S., and Venkataraman, S. (2000), 'The promise of entrepreneurship as a field of research'. *Academy of Management Review*, 25, 217-226.
- Sissons, A. (2011), *Britain quiet success story: Business service in the knowledge economy*. London: The work Foundation Lancaster University.
- Sutton, J. (1998), *Technology and market structure*. Cambridge: MIT Press.
- Svetina, A. C., and Prodan, I. (2008), 'How internal and external sources of knowledge contribute to firms'

- innovation and performance', *Managing Global Transitions*, 6(3), 55-77.
- Tidd, J., Bessant, J., and Pavitt, K. (2005), *Managing Innovation: Integrating, technological market and Organizational Change* (3rd ed.). Chichester: John Wiley and Sons.
- Uzowanne, J. (2011), 'Africa from the bottom up: Cities, economic growth and prosperity in sub-saharan Africa'. *Monitor*, 1- 123.
- Venkataraman, S. (2000), 'The distinctive domain of entrepreneurship research in advance', *Academic of Management Review*, 3 212-226.
- Wong, P. K., Ho, Y. P., and Autio, E. (2005), 'Entrepreneurship, innovation and economic growth: Evidence from GEM data'. *Small Business Economics*, 24(3), 335-350.
- Zenger, T. R., Lazzarini, S. G., and Poppo, L. (2002), 'Informal and formal organization in new institutional economics', *Organization Science* 9: 141-159