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ENTREPRENEURSHIP

TECHNOLOGY ABSORPTION AND PERFORMANCE OF WOMEN OWNED MSES INCUBATED AT THE KENYA INDUSTRIAL RESEARCH AND DEVELOPMENT INSTITUTE

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ABSTRACT

Purpose of the Study: The purpose of the study was to examine the role of technology absorption on performance of women owned MSEs which have been incubated at KIRDI.

Statement of the Problem: The Micro and Small Enterprises contribute significantly to all the countries globally through absorbing the unemployed in the various job opportunities created in various sectors. MSEs in Kenya created more than a half of the gross employment opportunities generated in 2015. Lately many startup companies are being developed daily, but only a few of them are able to survive and thrive to make profits.

Methodology: The study was a survey study design. The target population was 259 MSE women entrepreneurs who have graduated from KIRDI business incubation programs. The researcher did a census since it was appropriate for this study and used questionnaires to collect qualitative and quantitative data. The study analyzed data using descriptive and inferential statistics through Correlation and regression of variables. Results were reported through tables and figures. Statistical Package for Social Sciences (SPSS) was used to aid analysis of data. Data was analyzed and presented using descriptive and inferential statistics.

Result: The summary model results revealed R Square of 0.734 that presented a 73.4 percent of the total variation in performance of women owned MSEs and could be explained by incubation on technology absorption. The study also found that technology absorption variable positively and significantly affected performance of women owned MSEs (β=0.868, p=0.000<.05). The coefficient results denoted that a unit change in technology absorption results to an improvement in performance of women owned MSEs incubated by KIRDI by 0.868 units.

Conclusion: The use of technology such as social media enabled women to open MSEs to grow their businesses as they can use online search engines such as Google and social media channels such as Facebook to target various segments of their audience with highly tailored ads and content. For example, Google enables businesses to target by demographic and keywords, plus a number of other measures.

Recommendation: There is need to continue investigating the problems that hamper the technology transfer process, especially in light of the fact that most technology incubator programs usually indicate that their major objective is transfer and commercialization of technology.

Keywords: *Technology absorption, Incubation process, Women owned businesses, Industrial research and development institute.*

BACKGROUND TO THE STUDY

The idea of business incubation has been adopted in several nations to address the problem of MSEs mortality rate. They are defined as establishments that back up the entrepreneurship process, helping to upsurge survival rates and sustainability of for creative start-up enterprises (Finer & Holberton, 2002). Entrepreneurs with viable undertakings are nominated and accommodated in business incubation facilities, which provide them with a special set of appropriate technologies, infrastructure and skills such as according them physical space (meeting rooms, workshops and basic facilities); training on how to manage businesses including writing bankable business plans, training on financial literacy and how to market their products;, including investigators and staff with technical expertise who give them technical assistance and relevant information on business issues; aid in acquiring funds from micro finance institutions and other financiers; legal aid for contract matters, licences and intellectual property rights; management facilities; and networks with stakeholders and state bodies. The business incubators hand-hold the MSEs during their tender age for a period of 3-5 years by mentoring and coaching them.

Incubation have contributed insignificantly to the existence, job generation and increase in turnover of incubated businesses regardless of the period taken in the business incubation program (Schwartz 2020; Amezcua, 2020). Shehada, El Talla, Al Shobaki and Abu-Naser (2020), indicated that business incubation is an exceptional institutional procedure chiefly deals with development of an entrepreneurial culture in a society. None the less, the responsibility rests with the entrepreneur to ensure that the business survive, since the businesses may be affected by what Levakova (2019) refers to as the 'incubator syndrome'. Brooks (2018) stated that the entire concept of incubation is attitudinal because incubation nurtures a community attitude of inspiring and backing-up emerging enterprises succeed and perform well, and this reliant on on three important factors: an entrepreneurial and learning environment, ready access to monitors and investors and conspicuousness in the market.

The United Kingdom created workspaces in their modern form in 1975, when British Steel formed a subsidiary called British Steel (Industry) – BSI to generate employment in steel closure areas (Jamil et al, 2015). BSI created managed workspaces, occasionally outdoors of old buildings and often construction of new ones. BSI additionally backed several business incubators in UK's network of enterprise agencies, which provided advice to small enterprises, and became pioneer in North-West England, particularly in St. Helens, which encountered

technological redundancies in its major glass-making industry (OECD, 2019). In Germany, for example, the University of Berlin constructed the first incubator in 1983, whose objective was to easing the transmission of research findings to industry, and France followed in 1985, constructing the second one inside the Sofia Antipolis Technology Park (Aernoudt, 2017).

In Pakistan, there are several institutions of higher learning, including public and private universities which are offering courses in various fields (Qureshi Hassan & Mian, 2021). In Pakistan, there are several institutions of higher learning, including public and private universities which are offering courses in various fields (Qureshi Hassan & Mian, 2021). Several of the universities assist in provision of innovative business ideas and help in creation of employment opportunities for students graduating from the few institutions of higher learning in Pakistan who are not as competitive as foreigners (Qureshi & Mian, 2021). In addition new businesses are steadily being established; but, Pakistan currently undergoes problems of inadequacy of capital and the cost of acquisition of capital from sources which are not government based is quite expensive due to the high cost of return. Additionally, women MSE entrepreneurs do not have requisite entrepreneurial skills and financial support needed to improve the performance of their enterprises in the internationally competitive business environment. In an effort to build a vibrant economic development, the number of incubators is growing worldwide which is making governments and other agencies that support these incubators to put more attention to evaluating their performance (Butt, et al., 2020).

In Tanzania, records indicate that nearly 700,000 job seekers join the job market annually out of which half a million are school leavers having low skills on business and entrepreneurship. The government takes up only forty thousand of the job seekers 40,000, leaving the balance of six hundred and sixty thousand to join the unemployment arena who get engaged in the informal sector. Current approximations display that the MSE sector employ 3,000,000 to 4,000,000 persons, amounting to twenty to thirty percent of the whole persons in employment who also contribute thirty-five to forty- five percent of GDP (Massawe, 2000 ; Finseth, 1998). However, survival rate of start-up MSEs is quite minimal with more than 3 out of 5 new MSEs surviving only the first five years of being in business. To arrest the situation, Tanzania has established a centre (UDEC) to nurture MSEs where owners of enterprises are taught business skills. The centre provides entrepreneurs with Business Development Support e.g. preparing business plans acceptable by banks and linking them with financial institutions.

In Kenya, in recognition of MSEs importance in reducing poverty levels and their input to economic development, the government has invested a lot of resources to revamp this sector, (Meru & Struwig, 2011). MSE sector with its both formal and informal mechanism has increasingly been viewed as a method of creating meaningful jobs and justifiable job openings, vulnerable groups and persons living with disabilities (ILO, 2008). MSEs are seen as drivers of the Kenyan economy and according to International Labour Organization (ILO) employment creation is a key tenet of the Decent Work Agenda. While on average, about 400, 000 new job seekers enter the Kenyan markets; its economy generated 841,600 new jobs in 2015. Out of these new jobs, the formal sector (modern sector) only generated 128,000 new jobs. This imply that the informal sector created about 713, 600 new jobs, Economic survey, Republic of Kenya (2016).

In the last ten years, women entrepreneurship has stood out and documented as a remarkable contributor to development of various economies which has not been exploited especially in less developed countries where an increase in the participation by women engaging in entrepreneurial

activities has been observed. Activism on activities to empower women and policies being implemented by government and non-state agencies is accredited for this phenomenon (Eyben, 2008). It is observed that most of the MSEs in Kenya are owned by women and have therefore a large effect on the development of the economy. This zeal could be ascribed to the major role they play in taking care of their families. One of the characteristics of MSEs in Kenya is domination of women in businesses unlike the case of large industries with at least one third of MSE operators being women (URT, 2015). According to Sitterly (2010), approximately over half of the MSEs are under women ownership, with a commendable achievement rate of 80 percent. Reports also show that MSEs with whole or semi female proprietorship are over thirty eight percent (8 to 10 million) of formal small enterprises in evolving economies (IFC & Mckinsey, 2011).Theo and Chong (2007) also state that specific traits of the entrepreneurs, the way entrepreneurs are motivated and purpose of starting and operating an enterprise, being able to network, business positioning, plus the management styles of the entrepreneurs have a lot of influence on the achievement of MSEs.

Even though women are being dynamic in MSEs, they experience certain problems and challenges especially in business management and administration since quite a number of them have little skills on management and administration of business enterprises. MSE women entrepreneurs lack adequate knowledge and skills on management and mostly, they implement managerial strategies by experimental mechanisms. Their managerial practices only concentrate on short term strategies rather than issues which are strategic to the enterprises. Additionally, the practices of MSE managers are not standard with what happens internationally. Other challenges experienced by the MSE sector comprise inadequate infrastructure, gender bias in working environment in which they operate, misappropriation of resources and insufficient backing by the government. Skills for making decisions, good organization skills and financial literacy especially book keeping are also noticeably minimal amongst MSE women entrepreneurs.

According to Ndabeni (2008), 87% of incubator graduates remained in operation, in computation of time rising to 44% of all firms. The concept of business incubation is slowly gaining root in Kenya, BIAK (2012). The Government of Kenya has recognized the vital part that incubators input into entrepreneurship advancement and growing sustainable MSEs that contribute to employment and wealth creation. The Technology Business Incubator at KIRDI was established in July 2006 by the Government in the Ministry of industrialization. The goal behind the establishment of the facility was to incubate MSEs by facilitating technology transfer and promoting value addition skills to improve their products to make them more marketable. The Technology incubation process gives assistance to start-up companies to adopt and apply innovative technology, assimilating, absorbing and using of essential technology to hasten success and growth of the MSEs. MSEs are offered technological assistance or infrastructural facilities in addition to business development services.

Incubated MSEs enjoy facilities and services at the incubation centres which the un-incubated MSEs don't access. The incubation process gives the incubated MSEs time to focus on production without worrying about, the acquiring technology and expenses of electricity which are normally high up to the time they are able to acquire adequate technology and generate adequate profits to meet their personal financial commitments. Business incubation program have also been introduced at Kenya Industrial Estates, Universities like Chandaria Innovation Centre in Kenyatta University and private players like KEKOBI. All these initiatives are geared towards improving achievements and operations of MSEs to make them profitable, sustainable and prolong their lifespan and even enable them to graduate to bigger enterprises. This paper

sought to contribute to this effort through analyzing effects of business incubation support programs on performance of women owned MSEs in Nairobi, Kenya.

STATEMENT OF THE PROBLEM

The government of Kenya has inaugurated several women empowerment programs which include provision of funds e.g. Women Enterprise Fund and business incubation support programs at various institutions including Kenya Industrial Estates and Kenya Industrial Research Development Institute. However, despite the considerable support from the government many of these businesses managed by women usually do not succeed. Numerous information sources indicate that enterprises with female leadership get into businesses and exit annually with a failure rate of approximately32% per annum (Organization for Economic Co-operation and Development, 2015). Subsequently, despite allocations of huge sums of money to promote the growth of women owned MSEs through government financing, business development services, subsidies and extension and consultancy services, success of MSEs ran by women is still low (Noor, 2010).

MSEs owned by women are characterized with minimal capital to start and initial funds for operations (Ndururi, 2020). Global Entrepreneurship Monitor (2020) indicated that usually in normal situations women owned MSEs experience stagnated rate of development and minimal probability of expansion partly because of various problems, for instance inadequate appropriate technology, general absence of an entrepreneurial culture, inadequate funds to meet family obligations and for operation of their enterprises which hinder development of the MSE since the meagre yields from the enterprise is frequently utilized to cater for immediate family needs (Mutahi, 2020). Despite the significance, previous studies done on women owned businesses showed that 60% of the new enterprises do not succeed during the initial years of initiation (Kenya National Bureau of Statistics, 2015).

Further, despite many initiatives used and resources employed by sponsors, donors, micro finance institutions and other agencies promoting women entrepreneurship, the growth of the women MSEs is still stagnated. MSEs owned by women entrepreneurs constantly show minimal performance with low profits, low sales volumes and small market share. KIRDI has specifically been involved in incubating women entrepreneurs. To date, the institution has incubated approximately 259 women MSEs in this program. The main objective of the research therefore, was to examine the role of technology absorption on performance of women owned MSEs which have been incubated at KIRDI.

RESEARCH OBJECTIVE

To examine the role of technology absorption on performance of women owned MSEs which have been incubated at KIRDI.

RESEARCH HYPOTHESIS

H_0: Technology absorption has no statistically significant effect on the performance of women owned MSEs which have been incubated at KIRDI.

THEORETICAL FRAMEWORK

Entrepreneurship Theory

Entrepreneurship theory, seeks to expound on how and when an entrepreneur might get involved in entrepreneurship (Bull & Willard, 1993). They argue that entrepreneurship will take place in

situations of job-oriented inspiration entrenched in the specific job which inspires the originator to perform the task and current knowledge or know-how and assurance of the ability to acquire know-how required for future operation. In addition, there is anticipation of the entrepreneur being economically and psychologically self-reliant in a conducive business environment free from harsh business conditions and barriers. According to them, incubators help entrepreneurs in acquisition of credibility. By an MSE being accepted into a successful program it is insinuated that the firm has been scrutinized as having potential to perform well with the possibility of the incubator reducing the period required to acquire prerequisites of running a well performing MSE.

Baron and Shane (2008) define the process of entrepreneurship as comprising five steps beginning with having an idea to produce a new product or come up with a new service, continuing with the decision to progress to the putting together of resources, the actual starting of the undertaking and lastly the establishment of a successful MSE. This procedure was used by Peters et al (2004) in a model to test how incubators affected the entrepreneurial practice, by investigating the services provided (infrastructure, coaching and networks) and making a comparison of the level of services provided by different incubators with graduation rates. The authors concluded that incubators aided entrepreneurship, but however admitted that studying graduation rates alone did not adequately describe how entrepreneurship was being nurtured.

Communities of Practice Theory

Communities of practice theory, is principally credited to Lave and Wenger (1991) and the theory has been used by several authors. In the later descriptions by Wenger (1998), he clarified that to learn or the acquire knowledge can arise in a social setting and that information sharing can occur in social. Lave and Wenger proposed that there are three elements that can be used to describe a community of practice which include members identifying as a community; presence of an activity and collaboration amongst memberships of the community and existence of common resources for instance language (i.e. technical terms), customs, tools and stories (Lave & Wenger, 1991; Wenger, 1998).

Wenger (1998) also proposed that communities of practice grow about an area of interest that which members have an interest in, which makes members have a sense of joint enterprise and identity. Several studies have been done on incubator practice and processes by referring to this theory by creating a comprehension on how MSE firms housed in business incubators benefited from business practices in the facilities and the relationships between incubator management and the MSEs (Bollingtoft & Ulhøi, 2005; Fang, 2010; Hannon, 2005). This theory is in reference to the variable on technology absorption provided by business incubation facilities.

EMPIRICAL LITERATURE

Technology transfer describes the method of transferring technology from the business incubation centers to incubates, both formally and informally. The process encompasses provision of specific technical skills to incubate who use the technology to produce goods. The transfer can be seen or not seen depending on the type of technology being transferred, for instance MSEs incubated in KIRDI got technology to fabricate arc welding machine. The incubates in ICT receive training on information technology which they can apply to do their daily operations which is invisible but with great impact on their production. The technology transfer can include actual resources, knowledge, and expertise (Bozeman et al., 2000). The

MSE entrepreneur is taught to utilize a set of rules and procedures to produce goods and services.

The import of capital goods and machinery is amongst the main methods of technology transfer for strengthening industrial infrastructure and reinforcement of a beneficiary country technological ability. This network of technology transfer that is chiefly deployed by several Less Developed Countries especially the East Asian Newly Industrialized Countries (NICs) supported these nations in acquisition of the innovative technologies with use of modern technology and tools. Nonetheless, the success of this technique of technology transfer in the progress of beneficiary country's indigenous technological ability depend on the level of industrial progress in addition to the level of technical and managerial know-how and its adoption capability (Republic of Kenya, 1989).

Proprietors of MSEs who have interest in engaging into the catering businesses require to think about acquisition of important and durable technological equipment or machineries for their business entities. Though, as it encompasses high cost, exhaustive or cautious planning should need to be done by the proprietor or an accountable supervisor before any technological equipment can be procured. To do this a proper examination and cross referencing with those companies who already utilized such equipment should be executed (Munira et al., 2011).

Liddle (2009) pointed out that some hospitality business entities supposed that the tools and technology in the hospitality industry was limited to basic machines and implements without visualizing that several advanced technological appliances are required. Grimes (2009) contended that several innovative specifications may be included on those tools for instance timers and digital temperature devices, to make them more efficient. Liddle (2009) indicated that MSEs in the hospitality industry have promptly adopted new technology leading to improved efficiency of MSEs operations resulting to better MSE performance.

Object-embodied technology otherwise referred to as "Techno-ware" is comprised of various constituents of technology which include implements, equipment, machinery, automobiles and physical infrastructure. The intensifications in client’s demand and capacities of production have made many MSEs in Kenya to adopt new technology. Methods of technology transfer comprise acquirement of capital equipment and machinery by procurement, accrediting (and/or franchise or licensing) contracts under which technical expertise, concepts and technical information are transferred by moving experts and experienced workforce (Liddle, 2009). Application of technological equipment greatly.

According to Gibson (1994), the greatest effective method of achieving technology transfer is to transfer the persons with the prerequisite skills to the areas requiring the technology in question. Use of computers and other closely linked technologies is an example of how fast technology can be transferred. This implies transfer of important technical and high-tech information and competencies to the greater numbers of persons essential in the work place to guarantee successful “transfer” of technology and effective utilization. Capacity transfer comprises offering expertise and software to both in the manufacturing of existing products and more significantly, to be innovative and adopt current technologies to improve product development and eventually make new products (Phillips, 2002). Global travelling of persons is linked to the students studying or being employed in foreign countries for a short term and using the acquired skills and competencies in their home country.

Most MSEs fail when the levels of education for the entrepreneurs is minimal. MSE operators therefore need to embrace the contribution of technology in manufacturing procedures, productivity improvement and being competitive. Though the MSE entrepreneurs may be willing to adopt new technology, their inadequate educational levels unfavorably impact on the absorption capability of pre- requisite technology (ILO, 2005). Cohen, (2004) contended that the ability to utilize of outside knowledge is dependent upon the level of past correlated knowledge. This past knowledge comprises elementary skills, common dialect in addition to comprehension of previous scientific and technological advancements.

MSEs need to have the ability to produce and sell a wide range of new products or services by using requisite technology but should in addition be wary about their competitors (Sheu, 2007). Technology transfer makes doing work easier and tasks are done in a short time. Technology allows flexibility by eliminating movements which may not be important while also several operations can be consolidated or procedures used in the past can be improved (David et al., 2011). This saves time and products of better quality are produced. The International Journal of Business and Management (August, 2009) additionally describes enterprise development as the capability of MSEs to develop continuously, rapidly and with good performance by optimizing use of requisite technology.

Business process re-engineering (BPR) is a procedure of improving quality, just-in time, or cycle 50-time lessening program. The activities commonly put stress by refining the present technique making it to be done with ease and with speed. Start-ups require a great support to enable them to thrive, create jobs and increase Gross Domestic Product. In a report presented by KIRDI (2006), for Kenya to succeed in manufacturing and be an industrial hub and to be able to compete globally, it needs inexpensive, effective and clean technologies, suitable technologies to enhance the growth of MSEs, improve their efficiency, encourage industrial production, value addition and export promotion through promotion of industries focused on export markets. According to Roomi, Harrison & Beaumont-Kerridge (2009), enterprise development is dependent on the capability of a business to continue being in operation in a competitive market.

The capability of a business to survive depends on adoption of new technology, production of new products in line with the prevailing demand and creativity of an enterprise which can lead to greater market access. Additionally, businesses should strive for sustainability and continue to operate at minimal costs regardless of challenges in the market (Journal of Small Business Management, 2013). KIRDI provides office space, counseling and training to MSE women entrepreneurs on how to use new technology to improve their products. The processes include fruit processing, honey processing, mushroom production, cassava processing, mini tanneries where entrepreneurs are assisted to make leather products like shoes and belts, production of soaps, detergents and beauty products.

CONCEPTUAL FRAMEWORK

The conceptual framework illustrates the relationship between the dependent variables and that Programs influence on performance of Women owned MSEs and independent variables. Figure 1 show the conceptual framework used in this study.

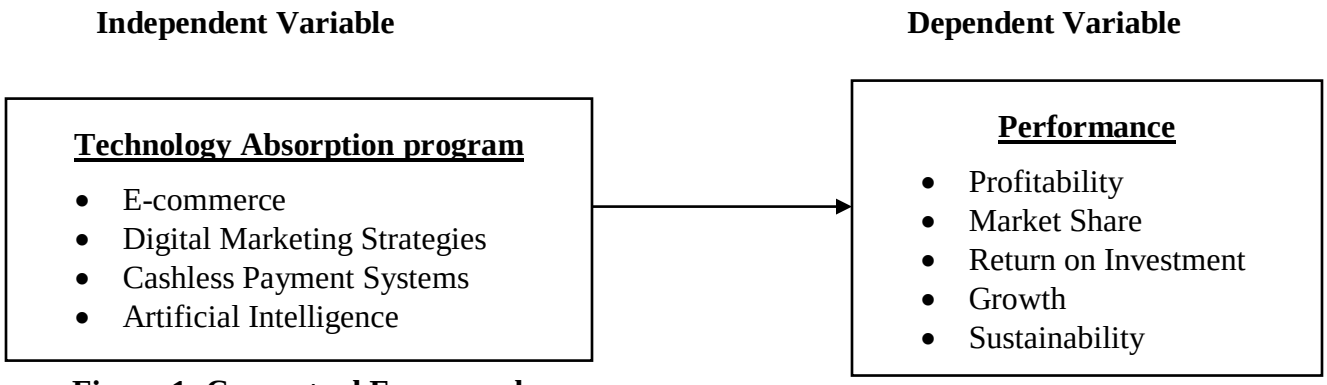

Figure 1: Conceptual Framework

Source: Researcher (2021)

RESEARCH METHODOLOGY

The study employed a descriptive research design. The reason behind this was that it helps in understanding characteristics of a group in a given situation, think systematically about aspects in a given situation, and offer ideas for further probe and research and help in making certain simple decisions (Sekeran, 2013). In this research survey, primary data was collected and analyzed. The target population of this study consisted of two hundred and fifty-nine (259) women MSE entrepreneurs. These were drawn from MSEs entrepreneurs graduates from KIRDI business incubators operating in Nairobi in the last five years. This was as documented in KIRDI records as presented by the officer in charge of business incubation. The researcher carried out a survey and utilized the whole population i.e. a census. Since the population was small, there was no need for the researcher to conduct sampling. Therefore, census approach was adopted to study all the Two hundred and fifty-nine (259) MSEs entrepreneurs operating in Nairobi who have graduated from business incubators at Kenya Industrial Research Development Institute (KIRDI).

For the MSEs, the study focused only on those which have employed not more than 10 employees (Kenya definition of MSEs by the number of employees).The researcher designed questionnaires, interview guides and schedules for the women owners of MSEs that had graduated from Kenya Industrial Research Development Institute (KIRDI) business incubators. To undertake this study researcher administered the questionnaires to the women owners of the MSEs with the aim of collecting both qualitative and quantitative data. The study was based on empirical research in which primary data was used. This study used purely primary data, which was collected using questionnaires that were designed by the researcher and administered to small-scale women entrepreneurs. The researcher distributed questionnaires to Two hundred and fifty-nine (259) MSEs women entrepreneurs operating in Nairobi who had graduated from business incubators in Kenya Industrial Research Development Institute (KIRDI). The data was analyzed by use of descriptive and inferential statistics and the results were presented inform of frequency distribution tables and charts. Inferential statistics was carried out by correlation and regression of variables.

FINDINGS AND DISCUSSION

In this study, a total of 259 questionnaires were administered to the respondents out of which 207 were returned to the researcher which translated to 80% which was considered to be appropriate.

It was a challenge to get back all the questionnaires because some of the respondents claimed to be busy due to the nature of their work. The returned questionnaires were used for data analysis. Based on the demographic results, most of the respondents 128(61.8%) were aged between 36-55 Years pointing to the fact that majority of the women who took part in the study were senior women capable of making informed choice whether to seek incubation in their businesses or not. The results also show that 30(14.5%) of the respondents were aged above 55 years, 26(12.6%) of the respondents indicated that they were aged between 18-25 years. The study show that 23(11.1%) of the respondents were aged between 26 and 35 years. The results imply that most of the women involved in the study were people old enough to make decisions in their businesses.

The results on the level of education showed that majority of the respondents 90(43.5%) were diploma holders, 83(40.1%) of the respondents indicated that their highest level of education was bachelor's degree, 30(14.5%) were secondary school graduates, while only 4(1.9%) had primary school as their highest education level attained. These results on level of education imply that most of the women MSE entrepreneurs in Nairobi County are well educated people who understand and are well informed about business incubation. They were also able to apply the skills learned in the business incubation centers.

In terms of the length of existence, the results show that most of the MSEs 109 (52.7%) had been in existence for a period of between 5 and 10 years, 51 (24.6%) of the MSEs had been in existence for just less than two years, 24 (11.6%) of the businesses had been in existence for more than 10 years, while 23 (11.1%) of the businesses indicated that they had been in existence for between 2 and 5 years. The results imply most of the women owned MSEs incubated at KIRDI in Nairobi, Kenya have been in existence long enough so they were best suited to be involved in this study.

From the analysis of the results, it was observed that most of the respondents 137 (66.2%) indicated that they had hired between 4 and 6 employees within that period, 55 (26.6%) had hired between 1 and 3 employees in five years, while 15 (7.2%) of the respondents indicated that their businesses had hired between 7 and 10 employees within that period. The results imply that most of the women owned MSEs incubated at KIRDI in Nairobi, Kenya have been growing in terms of increase in number of employees. The increase in number of employees was an indication that the businesses were recording improvement in their performance which enabled them to employ more labor force.

DESCRIPTIVE STATISTICS

The researcher sought to find out how technology absorption had affected the performance of women owned MSEs which had been incubated at KIRDI. The results are presented in Table 1.

Table 1: Descriptive Summary Statistics on Technology Absorption

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
Since I started adopting E-commerce I have noticed significant improvement in my business.	1.00%	0.00%	3.40%	39.60%	56.00%	4.498	0.660
I use digital marketing strategy to market my goods and services.	4.30%	0.00%	1.00%	36.70%	58.00%	4.440	0.890
I have acquired enough coaching on the use of cashless payment systems which I now use in my business.	3.40%	1.00%	1.00%	41.10%	53.60%	4.406	0.853
Artificial intelligence enables me to scale my customer engagement and experience and free up the resources needed for more critical customer interactions in my business	0.00%	2.40%	6.30%	34.80%	56.50%	4.454	0.722
I have acquired knowledge on CRM a cloud-based software which provides me with several benefits including increase in revenue and customer retention.	0.00%	1.40%	6.30%	32.90%	59.40%	4.502	0.682
I am now able to use Social media for both marketing functions and to maintain contact and receive feedback from my customers.	0.00%	0.00%	6.30%	28.00%	65.70%	4.594	0.607
My business is now digitally advanced since I now have a website which enhances the visibility of my business to a large extent.	0.00%	2.40%	5.30%	28.00%	64.30%	4.541	0.708
I am now adopting Location-based tools which enable my customers to locate my business easily.	0.00%	2.40%	6.30%	28.00%	63.30%	4.522	0.723
Average						**4.495**	**0.731**

The results presented in Table 1 show that most of the respondents were in agreement with the statement that since they started adopting E-commerce they had noticed significant improvement in their respective businesses (Mean=4.449, Std. Dev=0.810). This implies that it is important that the women entrepreneurs are incubated on ecommerce. An e-commerce website is a rather cost-efficient way to have exponential growth of your enterprise and every new business is constantly working to increase their consumer base. An e-commerce startup will reach a wider range of people and this will result in the improved performance of the business. The results also show that most of the respondents had learnt to use digital marketing strategies to market their goods and services (Mean=4.440, Std. Dev=0.890). As indicated by Saura, Palos-Sanchez and Correia (2019), digital marketing, especially social media marketing has the capacity to bring a startup closer to its target audience. Digital marketing will not only help the business record sales, it will also increase the potential customers' engagement with business brand.

Further, the results show that most of the respondents believed they had acquired enough coaching on the use of cashless payment systems which they were using in their businesses (Mean=4.406, Std. Dev=0.853). Most of the respondents also indicated that training on artificial intelligence had enabled them to scale customer engagement and experience and free up the resources needed for more critical customer interactions in their businesses (Mean=4.454, Std. Dev=0.722). Additionally, most of the respondents did agree that as a result of business incubation they had acquired knowledge on Customer Relationship Management (CRM) a cloud-based software which provided them with several benefits including increase in revenue and customer retention (Mean=4.502, Std. Dev=0.682).

The study also found that most of the respondents agreed with the statement which indicated that they were able to use Social media for both marketing functions and to maintain contact and receive feedback from their customers as indicated by (Mean=4.594, Std. Dev=0.607). Social media plays an essential role in marketing strategies by increasing traffic and serving as a part of the Search Engine Optimization (SEO) strategy. Businesses startups need to work on their social skills and how they interact with their customers online for the best results. Similarly, most of the respondents were in agreement with the statement that their businesses were digitally advanced since they had their businesses incubated by KIRDI and so, they had websites which was enhancing the visibility of their businesses to a large extent (Mean=4.541, Std. Dev=0.708). Finally, the results show that most of the respondents were in agreement with the fact that they were able to adopt location-based tools which enabled their customers to locate them easily after having their businesses incubated (Mean=4.522, Std. Dev=0.723). The results on technology absorption are consistent with the conclusion made by Bozeman et al. (2000) that, incubates in ICT receive training on information technology which they can apply to do their daily operations which is invisible but with great impact on their production. The technology transfer can include actual resources, knowledge, and expertise.

CORRELATION ANALYSIS

Correlation Coefficient was computed and used to test whether there existed interdependency between independent variables and also whether the independent variables were related to the dependent variable. Scholars argue that correlation coefficients greater than 0.5 are strong, 0.3-0.5 (moderate), and less than 0.3 (weak) (Heale & Twycross, 2015). Table 2 shows correlation analysis results.

Table 2: Multiple Correlation Matrix

		Performance	Technology Absorption
Performance	Pearson Correlation	1.000	
	Sig. (2-tailed)		
Technology Absorption	Pearson Correlation	.857**	1.000
	Sig. (2-tailed)	0.000	

** Correlation is significant at the 0.01 level (2-tailed).

Results in Table 2 show that there was a strong positive and significant association between technology absorption and the performance of women owned MSEs incubated by KIRDI (r=0.857, P-value=0.000<.05). This implies that the technology absorption skills women entrepreneurs acquired through incubation by KIRDI had positive impact on their businesses. This implies that training women entrepreneurs on technology absorption positively influences the performance of their businesses. Technology also helps these women owned MSEs to understand their cash flow needs and preserve precious resources such as time and physical space.

REGRESSION ANALYSIS

The study conducted regression analysis to assess the statistical significance of technology absorption on performance of women owned MSEs. Tables 3, 4 and 4 show the results.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857a	0.734	0.733	0.27552

a. Predictors: (Constant), Technology Absorption

Source: Researcher, (2021)

The regression analysis results between technology absorption and performance of women owned MSEs indicated a coefficient of determination R Square of 0.734 and R of 0.857 which is significant. The coefficient of determinant (R-squared) of 0.734 presents a 73.4 percent of the total variation in performance of women owned MSEs and can be explained by incubation on technology absorption. On the other hand, the Adjusted R Square of 0.733 shows that technology absorption in exclusion of constant variable, explained in the changes in the performance of women owned MSEs incubated by KIRDI by 73.4 percent. The remaining (26.6%) can be elucidated by the factors not included in the regression model under investigation. The average deviation of the independent variable from line of the best fit is (0.27552).

Table 4: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.9	1	42.9	565.136	.000[b]
	Residual	15.562	205	0.076		
	Total	58.461	206			

a. Dependent Variable: Performance
b. Predictors: (Constant), Technology Absorption

Source: Researcher, (2021)

The results indicate that the model was statistically significant in explaining effect of technology absorption and performance of women owned MSEs as indicated by a p-value = 0.000; F (1,206) =565.136. The P<0.000) which is less that the critical value of 0.05. Therefore, technology absorption can be used as predictor in explaining the variation in performance of women owned MSEs incubated by KIRDI in Kenya.

Table 5: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.764	0.158		4.834	0.000
	Technology Absorption	0.868	0.037	0.857	23.773	0.000

a. Dependent Variable: Performance

Source: Researcher, (2021)

Performance= 0.764+ 0.868X

Where **X**= Technology Absorption

The regression coefficient results indicated that technology absorption variable positively and significantly affects performance of women owned MSEs incubated by KIRDI in Kenya (β=0.868, p=0.000<.05). The coefficient results denote that a unit change in technology absorption results to an improvement in performance of women owned MSEs incubated by KIRDI by 0.868 units. This suggests that good incubation program in technology absorption during business incubation can enhance the performance of women owned MSEs incubated by KIRDI in Kenya. This assertion was supported by the findings derived from descriptive results.

HYPOTHESIS TEST RESULT

H_0: Technology absorption has no statistically significant effect on the performance of women owned MSEs which have been incubated at KIRDI

The hypothesis was tested by means of multiple linear regressions. The decision to either accept or reject the null hypothesis was based on p-value. If the p- value is less than 0.05, the H01 is rejected but if it is greater than 0.05, then H01 is not rejected. Therefore, the null hypothesis was that technology absorption has no statistically significant effect on the performance of women owned MSEs which have been incubated at KIRDI. Results in Table 5 revealed a p-value<0.05. The null hypothesis was therefore rejected and the alternative hypothesis adopted that, technology absorption has statistically significant effect on the performance of women owned MSEs which have been incubated at KIRDI.

CONCLUSION

Based on the findings, the study concludes The study also concludes that the use of social media enables women opened MSEs to grow their businesses as they can use online search engines such as Google and social media channels such as Facebook to target various segments of their audience with highly tailored ads and content. For example, Google enables businesses to target by demographic and keywords, plus a number of other measures. Remarketing to users who have previously visited the business website and users who are searching for similar products is also possible; this kind of targeting allows businesses to offer valuable information to their audience segments. Unlike TV advertising that reaches a large audience with a general message, online display and search advertising let organizations cater specifically to what their audience is looking for. Technology absorption incubators provide a mechanism for technology transfer, promote the concept of growth through innovation and application of technology, support economic development strategies for small business development, and encourage growth from within local economies.

RECOMMENDATIONS

Based on the findings of this study, it is recommended that, the incubator facilities should consider acquiring modern technologies to match the emerging trends in production. In reference to government policies on MSEs, the government could commit itself to crafting policies conducive to growth of MSE sector and look into ways of reducing corruption. This would go a long way in promoting the development of a robust MSE sector.

The study found that technology business incubators have not had a high incidence of technology transfer despite the fact that many were established with that goal in mind. This finding implies that there is need to continue investigating the problems that hamper the technology transfer process, especially in light of the fact that most technology incubator programs usually indicate that their major their objective as transfer and commercialization of technology. The findings of this study have provided important insights to women owners/managers of the MMSEs, policy makers and researchers to further understand the effects of Training on Innovation and the Business Performance of women in the MMSEs. Thus, women should also be encouraged to improve their Training on Innovation which may increase their business performance.

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