

How Perception of Benefits And Property Ownership Influence Environmental Regulations Compliance by Micro and Small Enterprises in the Manufacturing Sector in Nairobi, Kenya

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Abstract

This research paper examines how perception of benefits and property ownership influence compliance with environmental regulations (ERs) by micro and small enterprises (MSEs) in the manufacturing sector in Nairobi City, Kenya. A sample of 10% (36 MSEs) was selected by stratified random sampling from a target population of 358 MSEs. Data was collected by questionnaires administered to the MSEs supplemented by interviews and observation schedule. The study established that majority of the MSEs perceived compliance with ERs as beneficial while non-ownership of business premises resulted in unwillingness to implement work place compliance measures due to lack of security of tenure. The study recommended enhancement of perceptions of benefits of ERs compliance through interventions by key actors and reduction of premises costs through increased property ownership by MSEs by availing soft loans, establishing industrial processing zones and industrial parks and encouraging MSEs partnerships on shared business premises.

Key Words: Perception Benefits Compliance Environmental Regulations Nairobi; Property Ownership Environmental Regulations MSES Nairobi; MSEs Compliance Environmental Regulations Nairobi, Perception Benefits Property Ownership Compliance

1. Introduction

1.1 Compliance With Environmental Regulations as Relates to Manufacturing MSEs

Micro and Small Enterprises (MSEs) are recognized as agents of industrial change and innovation, and important vehicle for employment creation and economic growth (Hisrich & Peters, 2000). A survey by Kenya Association of Manufacturers (KAM) on the manufacturing sector (2006) revealed that majority of the manufacturing firms were MSEs, employing less than 50 people. The KAM survey found out that overall collective contribution to economic development in Kenya by MSEs in the manufacturing sector was quite significant. According to Sessional Paper No. 2 of 2005 (Republic of Kenya, 2005) the MSE sector provided 74.2% of the total employment in Kenya in 200. Out of this, MSEs in the manufacturing sector created employment for 1.6 million people in 2005, representing 20% of the total employment in Kenya (Republic of Kenya, 2006). The MSEs contribution to the gross domestic product (GDP) was equally significant. For instance in 2005, the manufacturing sector contributed a total of KShs368.4 billion to the gross domestic product (GDP) of which manufacturing MSEs accounted for 85% (Republic of Kenya, 2006).

The contribution of the manufacturing sector to the GDP steadily increased to KShs717.2 billion and MSEs continued to account for the bulk of this contribution (Republic of Kenya, 2009).

According to United Nations Environment Programme (UNEP) and Micro and Small Enterprise Programme, MESP (2001), the collective contribution of manufacturing MSEs to the total pollution in Kenya amounts to as much as 50%. This coupled with the increasing numbers of the MSEs in the sector poses serious threats to natural so much needed for sustainability. This calls for sufficiently adequate response if Kenya is to attain its Vision 2030 objective of being a nation living in a clean, secure and sustainable environment by 2030 (Republic of Kenya, 2007). Muthoka *et al.*(1990) advocates that it is essential for a nation's citizens to understand the interrelationship between environment and development and choose a mode of development that will not destroy the resource base.. Environmental regulations compliance therefore serves the purpose of improved raw materials conservation for sustainable development (Republic of Kenya, 2006).

Sessional paper No.2 of 1996 (Republic of Kenya, 1996) notes that development and environment are intertwined such that any development that has to take place must address environmental concerns. It is further noted that totally unrestricted industrial development can have deleterious repercussions that either cannot be rectified or are very expensive to remedy. Therefore, it is important that the government establishes policies that counter such threats from the outset.

According to the Industrial Transformation to the year 2020 (Republic of Kenya, 1996), industrial development must adhere to standards of environmental protection and resource conservation, particularly with regard to industrial emissions, resource utilization, waste disposal and conditions in the workplace. Industries must pursue twin goals of productivity with efficiency and become more energy and resource efficient, waste minimization and proper waste disposal management (Republic of Kenya, 1996).

Despite the noteworthy contribution, manufacturing MSEs have been pinpointed as substantial contributors to environmental pollution and this calls for government action to regulate their operations especially waste disposal and the use of up-to-date machinery to minimize pollution (Quartey, 2001). A key aspect that has to be complied with is environmental regulations. Non-compliance with environmental regulations is known to degrade the environment as well as negative impact on human health and well being, for instance, the prevalence of certain cancers has been attributed to carcinogens due to plastic burning without complying with the laid down environmental regulations (UNEP & MESP, 2001).

Business managers and entrepreneurs are not only expected to improve quality, reduce costs and enhance flexibility, but they are also expected to become more environmentally responsible (Montabon *et al.*, 2000). In accordance with this objective regulatory authorities require that negative environmental impacts including those caused by MSEs in the manufacturing sector must be controlled (UNEP&MESP, 2001). Accordingly, strict attention should be paid to all kinds of industries that affect natural resources use through pollution and other effects to ensure sustainable availability of resources for the sector. According to Republic of Kenya (2000), all enterprises, including MSEs in the manufacturing sector, should comply with these environmental regulations by taking environmental audit and rectifying the activities which could be detrimental to the environment. This means that entrepreneurs should comply with all the environmental regulations regardless of the size of their enterprises in order to mitigate consequences of non-compliance such as being excluded from information, resources, international markets and closure of the business (Joshi, 2006; Malik,2002). To ensure wise exploitation of the resources, firms and individuals who cause environmental degradation could be subjected to deterrent punishments. Towards this end, firms are provided with environmental impact guidelines upon which they can undertake their self assessments. Also, every technology imported or developed locally has to be environmentally sensitive and must include waste management as a package (Republic of Kenya, 1996).

In Kenya, environmental management regulations are mainly enforced through the Environmental Management and Coordination Act (EMCA) of 1999 (Angwenyi, 2004). The Act provides for the establishment of appropriate legal and institutional framework for the management of the environment. Under this Act, all enterprises should undergo Environmental Auditing (EA), which is a systematic and objective evaluation of how effective organizational management is performing in safeguarding the environment.

It is a precautionary and a proactive environmental management tool which gives entrepreneurs opportunities to reduce waste, reduce pollution and improve operational efficiencies. The exercise essentially assesses an organization's activities and services in all its operations including compliance with relevant statutory and internal requirements. All entrepreneurs in manufacturing industries are required to comply with environmental regulations by undertaking environmental audit of their enterprises and rectifying their operations if need be, in order to reduce natural resource destruction and enhance sustainable development for increased employment creation in the sector.

1.2 Perceptions of Benefits and Compliance with Environmental Regulations

Ann *et al.* (2007), observed that the ability of business organizations to manage their environmental performance is emerging as a strategic issue for many companies. This is primarily because environment is now regarded as an asset to be valued. The question is whether and how MSEs perceive the benefits of ERs compliance. If environmental auditing is implemented in a constructive way, there are many benefits to be derived from the process and vice versa. These include identification of potential cost savings such as waste minimization, assist the exchange and comparison of information between different plants or subsidiary companies, demonstrate company commitment to environmental protection to employees, the public and the authorities, safeguard the environment thus conservation of natural resources for sustainable development, indicate current or future problems that need to be addressed, assess training programmes and provide data to assist in training and enable companies to build on good environmental performance (UNEP, 2005).

According to UNEP (2005) compliance with ERs included benefits such as conservation of natural resources for sustainable development, waste minimization; current or future problems that need to be addressed. As pointed out in the Republic of Kenya (2006), manufacturing industries depend on natural resources which can be destroyed by lack of environmental conservation leading to reduced employment creation in the sector. This scenario is exacerbated by increased industrialization which has led to increased waste production and the resultant pollution of the natural resources such as water, air, land and soil leading to un-sustainability of some manufacturing industries due to lack of adequate raw materials (Republic of Kenya, 2000).

There are cases of reported perceptions of benefits of compliance with ERs. For example KNCPC (2006) found that respondents reported increased profit margins in addition to conservation of natural resources as a benefit of ERs compliance. Positive results by all the firms which had complied with environmental regulations had been reported to Kenya National Cleaner Production Centre (KNCPC) which gives NEMA technical support in implementing EMCA regulations. Included in the benefits of compliance as reported by those enterprises is increased profit margins in addition to conservation of natural resources (KNCPC, 2006). However the KNCPC study covered medium and large enterprises and not MSEs.

A case of a manufacturing sub-sector affected by dwindling raw materials has been pinpointed in timber industry in Kenya where many millers had been denied permits to harvest trees since 1999 leading to closure of some timber related industries (Sunday Nation, March 16, 2008). However, the lift on the ban was being worked out as at the time of this study following the substantial recovery of the raw materials due to some entrepreneurs' better perceptions of the benefits and positive actions on compliance with environmental conservation regulations (Sunday Nation, March 16, 2008).

In a study conducted to establish the Impact of Environmental Management System (EMS) certification towards firm's performance in Malaysia, Ann *et al.* (2007) established that perceptions of benefits by respondents enhanced corporate image and that benefits obtained from EMS certification far outweigh the cost of its implementation. The results revealed that certification impacts positively on both the environmental and economic performance of enterprises. Respondents perceived enhanced corporate image to be the strongest impact of certification, and they believed that the benefits obtained from EMS certification far outweigh the cost of its implementation. The study concluded that to improve the quality of the environment, there needs to be a firm partnership between governments as the main regulations enforcer, entrepreneurs and the community.

From the findings of these studies, perception of benefits was expected to influence ERs compliance by MSEs. The question was whether such findings as those by Ann *et al.* (2007) for Malaysia and KNCPC which covered medium and large enterprises and not MSEs were applicable to manufacturing MSEs in Kenya. Hence there was need to establish manufacturing MSEs perception of benefits of compliance with ERs in Kenya.

1.3 Property Ownership and Compliance with Environmental Regulations

Timmons (2004) argues that entrepreneurs who do not own a resource are in a better position to commit and de-commit quickly while there is inherent inflexibility as a result of ownership. This inflexibility plays out as a major constraint under rapidly fluctuating conditions which may force business relocation to be the most judicious entrepreneurial decision to be made. Quite frequently some of the rapidly fluctuating conditions could be ERs compliance related to the business premises, for instance infrastructure to effectively comply with disposal of effluents and solid waste management, which the business owner may have to construct but the tenant may simply relocate to where such infrastructure is already available. This is consistent with Dollinger (2002) who argues that entrepreneurs seek to control resources as long as they are of strategic importance, as opposed to owning them.

According to Nyangute (2002), most MSEs did not have the security of tenure at their worksites and were therefore unwilling to fully comply with ERs. According to Nyangute (2002), most MSEs do not have the security of tenure at their worksites as there exists a problem of property rights coupled with complicated land allocation processes. MSEs may therefore not be willing to put in place measures needed to meet work place compliance with environmental regulations. This study was, however, undertaken before the enforcement of ERs as stipulated in the Environmental Management and Coordination Act (1999) in 2004. The gap was whether the situation for manufacturing MSEs had changed, more so after enforcement of ERs in 2004. These findings are in agreement with the theoretical propositions put forth by Timmons (2004) and Dollinger (2002) that inflexibility of business relocation by virtue of ownership of the business premises could be expected to make owners more inclined to comply compared to tenants who have no attachment to the property. However, there seems to have been no other empirical study on the influence of property ownership in Kenya on this area. Hence this study sought to empirically validate Nyangute's findings and more specifically on manufacturing MSEs in Kenya.

2. Methodology

The study adopted a mixed design approach. A sample of 10% (36 MSEs) was selected by stratified random sampling from a target population of 358 MSEs. The MSEs in the five most polluting manufacturing sub-sectors were heterogeneous regarding their manufacturing activities. Therefore, a stratified random sampling technique was used to proportionately select a sample of 36 manufacturing MSEs from the target population of 358 MSEs. According to Saunders *et al.* (2007) a sample size for a descriptive survey can be determined by taking 10% of the target population. To ensure that a sample population is truly representative of the target population regarding the characteristic under study, the same proportion of the corresponding population has to be selected to participate in the study in case of a heterogeneous population (Mugenda & Mugenda, 2008). The method of proportional allocation was applied in determining the sample size for each stratum. The population was divided into several sub-populations (strata) that were individually more homogenous than the target population; in this case the manufacturing activities in a sub-sector. A simple random sampling technique was used to pick individual MSEs from each stratum. Data was collected by questionnaires administered to the MSEs supplemented by interviews and observation schedule. Data was analysed quantitatively using SPSS and qualitatively based on the emerging themes.

The study also sought to establish the factors influencing MSEs compliance with ERs by inferential statistics by postulating and testing a logistic regression model. The model considered perceptions of benefits of compliance with ERs and property ownership as independent variables alongside other independent variables that included, awareness of environmental regulations, cost of compliance and experts capability. To do this the responses on the items in the questionnaires that measured compliance with ERs, awareness, cost of compliance, experts capability, perception of benefit and property ownership were processed as dichotomous categories with a value 1 indicating presence of characteristic and zero indicating absence of characteristic. As the dependent variable was dichotomous, it was stipulated that the relationship between the dependent variable, compliance with ERs, and the independent variables could be represented by a logistic regression model. The model was postulated based on Agarwal (1991) as follows:

$$\text{Logit (Compliance)} = \beta_0 + \beta_1 \text{Awareness} + \beta_2 \text{Cost of ERs compliance} + \beta_3 \text{Experts Capability} + \beta_4 \text{Perceptions of Benefits} + \beta_5 \text{Property Ownership}$$

Based on this model the following Null and Alternate hypotheses on the logistic regression coefficient, β_4 and β_5 for Perceptions of Benefits and β_5 Property Ownership respectively were postulated and tested:-

Perception of Benefits

Null hypothesis: $H_0 \quad \beta_4=0$

Alternate hypothesis: $H_1 \quad \beta_4 \neq 0$

Property Ownership

Null hypothesis: $H_0 \quad \beta_5=0$

Alternate hypothesis: $H_1 \quad \beta_5 \neq 0$

The significance of the regression coefficients β_4 and β_5 and the goodness of fit of the model was tested using the Pearsons Chi-square Test.

3. Results and Discussion

3.1 Entrepreneurs Perception of Benefits of Compliance with ERs

Asked whether compliance with ERs was beneficial to their enterprises, a majority (86.7 %) as illustrated in Table 1 found compliance beneficial to their enterprises.

Table 1: Overall Perception of Benefits of Compliance

	Frequency	Percentage (%)
Yes	26	86.67
No	4	13.33
Total	30	100

However, from the responses on attributes on key enterprise performance indicators (human resource base, certification and awards, net sales, profitability, number of customers) these benefits were not easily discernible as can be seen from Figure 1.

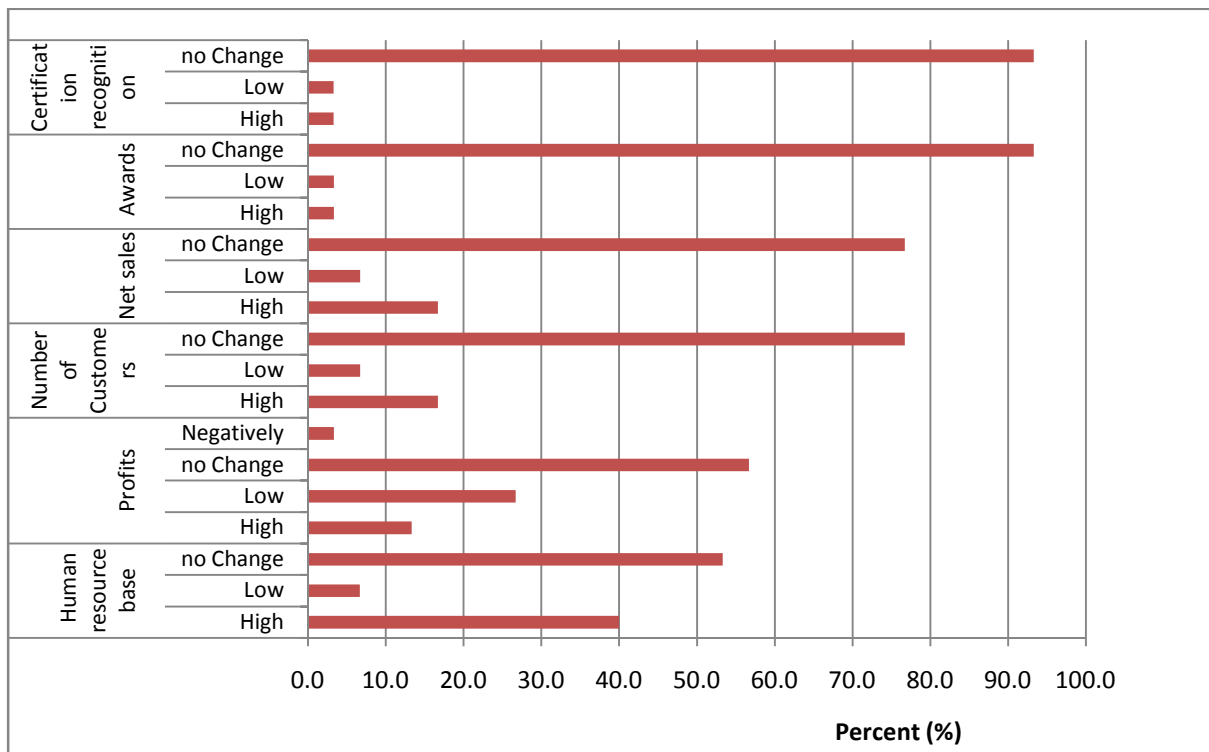


Figure 1: Benefits Accrued by Complying with ERs

Discussions with the management of the enterprises revealed that most of the benefits accrued included cleanliness of the environment and reduction in wastage of raw materials. For instance, entrepreneurs from Dagoretti slaughterhouse, which had been closed down due to non-compliance, now appreciate that compliance had benefitted them in that the working environment had improved greatly and as a result there is reduced health risks to the workers and a generally non-repelling ambience to customers. One excited entrepreneur commented as follows “We shall convert this ground to an entertainment spot. There is no more animal blood flowing like a river and we have now planted trees around the lagoons, where we can now rest during free time. We appreciate what NEMA has done for us”. He said all that with a wide smile on his face. He challenged the researcher to come back after a few months to witness the improvement. Therefore, although the percentages on the given attributes showed no change, majority cited other benefits of compliance other than the choices given in the questionnaire.

It can be argued that since enforcement of EA came to force in 2004, full realization of benefits had to come soon if this trend continues. Even though very few enterprises experienced negative impact in terms of reduced profits, they realized benefits in other areas and some said that it was a matter of time before they regained and exceeded the profits expectation as a result of the compliance. In the case of the slaughterhouses, the entrepreneurs had formed Dagoretti Environmental Management Association (DEMA) where they meet regularly and together plan how to conserve their environment. They were very excited about these benefits and had no doubts that in a few months, they would regain what was lost.

As observed, apart from the direct benefits of the entrepreneurs who had complied with ERs, compliance had benefited many other people such as the cleaners of the white coats, caps and gumboots, retailers and veterinary officers. As observed other beneficiaries included wholesalers of meat, meat brokers, paper bag industries, animal slaughters, water vendors, hotels who used meat and bones for soup, water tank suppliers, hand cart owners and many other self-employed freelancers. It was also observed that the complying enterprises were neat and well organized generally.

3.1.1 Benefits of ERs compliance

Asked whether they see ERs compliance as being beneficial to the enterprises, NEMA was of the view that those who complied acknowledge it was beneficial while some viewed it as a problem adding that even some who had not complied saw the benefit of the clean environment except that it may be too costly for them to comply. Asked the same question, KAM in answer said that MSEs appreciated the need to comply because compliance would also be reducing some of their operational costs in the long run.

This study established that there was optimism of increased profits by MSEs as a result of compliance with ERs. This is consistent with the results of KNCPC (2006) that compliance with ERs lead to increased profit margins in addition to the conservation of the environment. Some of the benefits as listed by UNEP (2005) such as cost savings from waste minimization, enterprise commitment to environmental protection, occupational health and safety and conservation of natural resources could all be achieved by the complying enterprises. This is expected to improve performance of the enterprises by reducing wastage and at the same time conserve the environment. Therefore, although the cost of compliance with environmental regulations may be too expensive for some MSEs, there are indications that compliance with environmental regulations would result in increased profits of the complying enterprises apart from conservation of natural resources on which they depend for their sustainability (KNCPC, 2004).

Further, this study is in agreement with Jay and Barry (2001) who stipulated that implementation of ISO 14000 series which encompasses environmental auditing would enable the enterprise to reap accrued benefits which includes positive public image and reduced exposure to liability, pollution prevention through minimization of ecological impact of products and activities, creation of competitive advantage and reduction on the need for multiple audits.

The results agree with those of Ann, *et al.* (2007) whereby certification was found to impact positively on both the environmental and economic performance of enterprises. Some of the respondents perceived enhanced corporate image resulting from certification and that the benefits outweighed the cost of its implementation in the long run.

The results also agree with the study by Joshi (2006) that MSEs that have no expertise and resources to meet conditions required could close the enterprises. The results showed that perception of benefits of compliance influences compliance with ERs.

The study established that some of the manufacturing MSEs perceived benefits of compliance as improved quality image by the attainment of Kenya Bureau of Standards (KEBS) and ISO certifications. The improved quality image as a result of compliance with ERs could lead to the MSEs being more competitive in the product markets both locally and internationally. This was in agreement with Malik (2002) that products of MSEs without ISO certification saturates the local market as their accessibility to international market is limited.

3.1.2 MSEs Owners Participation in Environmental Conservation Activities

It was postulated that if MSEs perceive compliance as beneficial a key indicator would be enterprise participation in environmental conservation activities as this would serve to showcase them positively to a wider cross-section of customers and stakeholders who could potentially implement interventions beneficial to MSEs. The study established that MSEs participation in environmental conservation activities was dismally low with less than 30% of the surveyed enterprises participating in any single activity as can be seen in Figure 2. It was therefore not surprising that only 2.9% of the enterprises had ever received any awards in recognition of compliance or efforts to conserve the environment.

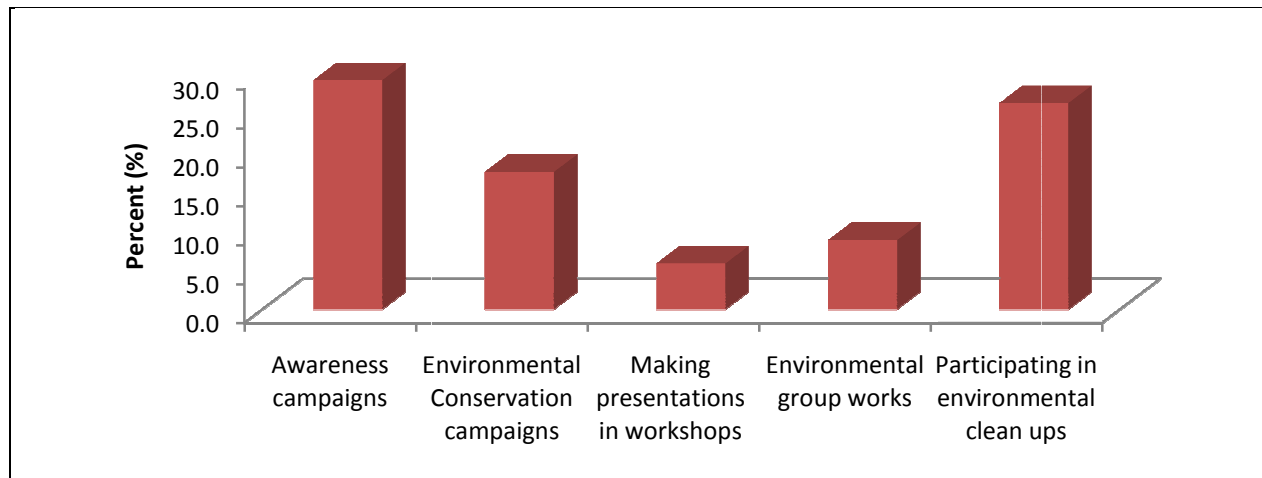


Figure 2: Participation In Environmental Conservation Activities

3.1.3 Awards for Environmental Regulations Compliance

It was postulated that awards for Environmental Regulations Compliance would be viewed as an incentive by MSEs. However the study established that only one enterprise out of the 36 studied responded that they received an award on environmental regulations compliance. The only awards won were in paper and paper board category. NEMA also reported that they do not issue any awards to individual MSEs.

3.2 Influence of Property Ownership on Compliance with ERs

Of the 30 enterprises that responded to whether or not they owned the business premises 63.3% responded in the affirmative. Only 36.7% rented the premises (Table 2).

Table 2: Property Ownership

	Frequency	Percent (%)
Yes	19	63.3
No	11	36.7
Total	30	100

Those who owned the premises were further asked about which compliance measures they had been able to implement because they were the owners. The results showed that compliance was highest on compound aesthetics standing at 46.6%. Compliance on the rest of the measures was low where protective gear and occupation health and safety measures with only 26.6% complying. The rest of the subsectors were below 15%. This showed an inclination of owners to implement measures that would have direct effects in the improvement of their own premises compared to obligatory compliance such as protective gear, health and safety of employees and the general environment as indicated by low proportions of those who complied with ERs on effluent disposal and air cleaning (Figure 3).

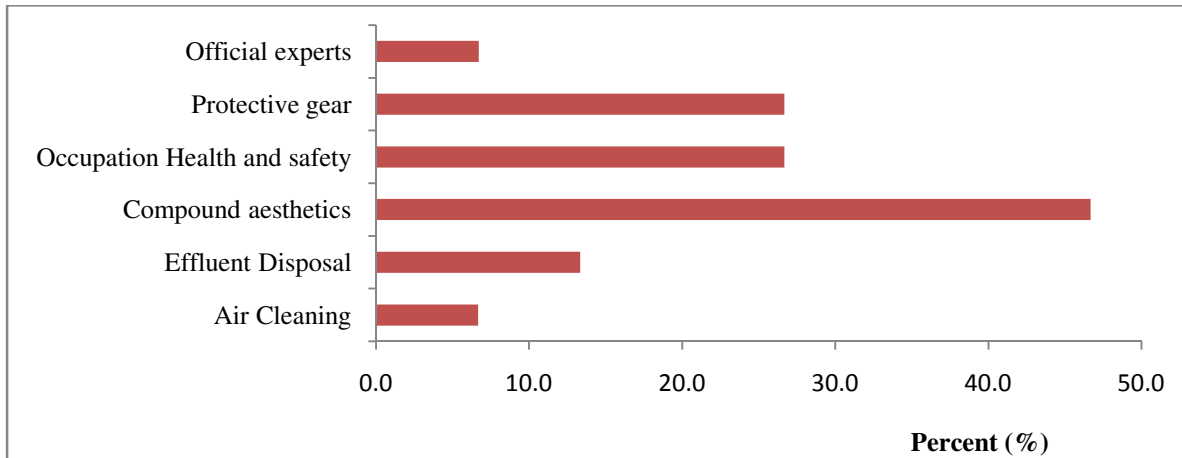


Figure 3: ERs Compliance Measures Undertaken Because of Being Premises Owner

Those entrepreneurs who did not own the premises were asked of any measures that they were unable to implement because of not being the property owners. The results presented in Figure 4 indicate that a relatively higher proportion of entrepreneurs were unable to implement air cleaning (40%) and effluent disposal (30%). This could be due to more permanent investments required to implement these measures which they may not be able to recover if they left the premises. In addition required structural adjustments associated with compliance of the measures may require the approval of the landlords which may not be forthcoming or might take too long.

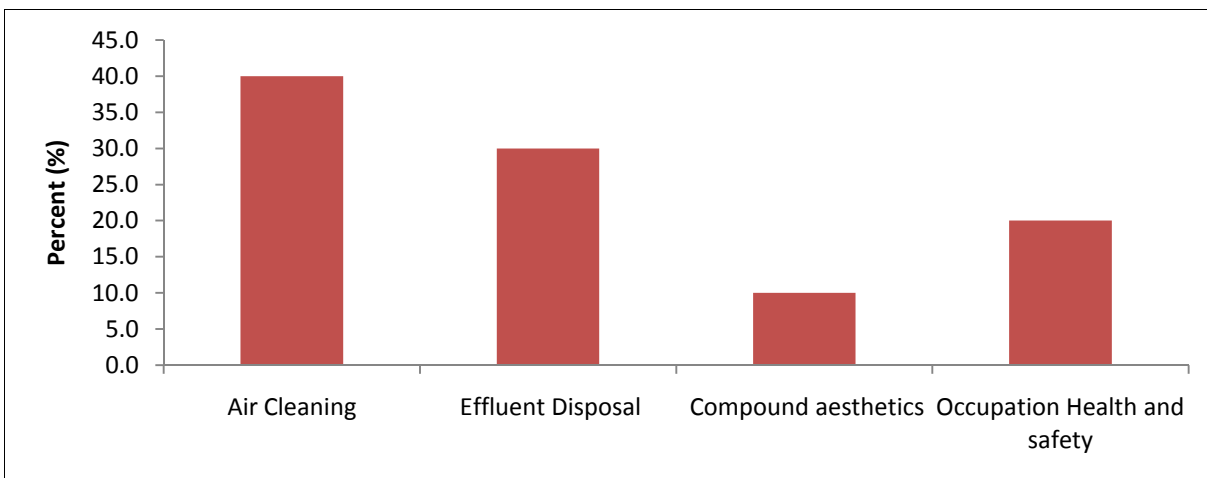


Figure 4 : Unable to Implement ERs Because of Not Owning Premises

The 11 MSEs that responded that they did not own the premises were asked whether there were measures they were unwilling to implement by virtue of not being property owners. The responses summarized in Figure 5 showed that a relatively higher proportion of entrepreneurs were unwilling to implement compound aesthetics (40%) and air cleaning (30%) because they did not own the premises.

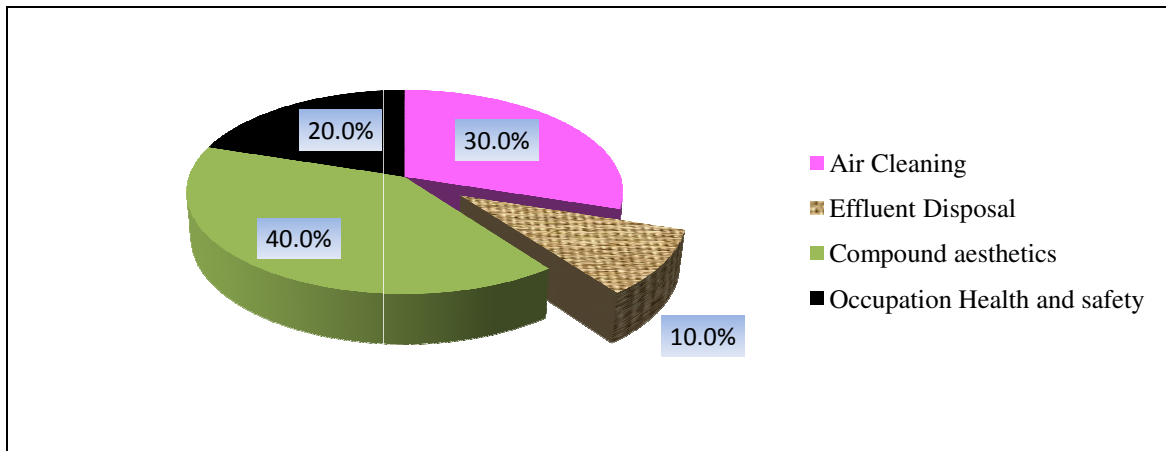


Figure 5 : Unwillingness to Implement ERs Because of not Owning Premises

The results agree with Nyangute (2002) that MSEs operators who do not own the premises they operate business from may not be willing to put in place measures needed to meet work place compliance with ERs. This was due to lack of security of tenure as the owners of the premises were the key determinants of the tenancy. According to the study, some entrepreneurs were not willing to implement some changes as recommended by EA experts because of not owning the premises. This included air cleaning (30%) and compound aesthetics (40%).

From observations some technologies recommended by the NEMA experts could not be implemented because the premises were rented. Some of the technologies required permanent structures which some entrepreneurs could not implement because they did not own the buildings. Generally, the rented premises were more neglected than the case where the owners operated businesses in their own premises. Although visible efforts to ERs compliance in actual work places were observed, aesthetics in majority of enterprises appeared neglected as entrepreneurs concentrated more on core production activities. The fact that some areas were neglected could explain the discrepancy between owner operated and rented premises.

3.3 Fitting the Logistic Regression Model for MSEs Compliance with ERs

As discussed in the Methodology Section, the model fitted was postulated based on Agarwal (1991) as follows:

$$\text{Logit (Compliance)} = \beta_0 + \beta_1 \text{Awareness} + \beta_2 \text{Cost of ERs compliance} + \beta_3 \text{Experts Capability} + \beta_4 \text{Perceptions of Benefits} + \beta_5 \text{Property Ownership}$$

Based on this model the following Null and Alternate hypotheses on the logistic regression coefficient, β_4 and β_5 for Perceptions of Benefits and β_5 Property Ownership respectively were postulated and tested:-

Perception of Benefits

Null hypothesis: $H_0 \quad \beta_4=0$
 Alternate hypothesis: $H_1 \quad \beta_4 \neq 0$

Property Ownership

Null hypothesis: $H_0 \quad \beta_5=0$
 Alternate hypothesis: $H_1 \quad \beta_5 \neq 0$

The significance of the regression coefficients β_4 and β_5 and the goodness of fit of the model was tested using the Pearsons Chi-square Test. The results showed that the logistic regression coefficient for perceptions of benefits and property ownership β_4 and β_5 respectively were not significant at 5% level of significance. The Null hypothesis for each of the independent variables perceptions of benefits and property ownership was therefore not rejected and it was concluded that perceptions of benefits and property ownership did not significantly influence MSEs compliance with environmental regulations at the 5% level of significance. This was further confirmed by the chi-square test, which, according to Agarwal (1991) and Mugenda and Mugenda (2008), can be used to test whether an independent variable is a significant factor influencing the dependent variable. The Pearson’s chi-square test results are presented in Table 3.

The results established that of the independent variables only awareness and experts capability were significant factors influencing compliance at the 5% level of significance as indicated by p-values of 0.022 and 0.006 which were below 0.05. However the goodness of fit of the model was not significant when only these two independent variables, awareness and experts capability, were entered into the model. The model goodness of fit improved with more variables entered.

Table 3: Test of Influence of Independent Variable on ERs Compliance

Independent Variable	Pearson's Chi-square (p-value)
Awareness	0.022
Cost	0.456
Experts' capability	0.006
Perception of Benefit	0.217
Property Ownership	0.939

The best fit for the model at 5% level of significant was obtained with the variables awareness, experts capability, perceptions of benefits and property ownership entered into the model, with a p-value of 0.03. Further the p-values showed that with all the stipulated factors entered into the model the goodness of fit, with a p-value of 0.085, was significant at 10% level of significance. It was therefore deduced that awareness and experts capability alone could not adequately explain the variation in the dependent variable, compliance with ERs. Rather the variation in the dependence variable was best explained when all the independent variables were entered into the model. This was well indicated by the increase in the pseudo R-square when all the other variables were entered into the model. This meant that the other independent variables, including perceptions of benefits as well as property ownership contributed to improved explanation of the variation in the dependent variable. This showed that perceptions of benefits as well as property ownership amongst the other stipulated independent variables, influence MSEs compliance with ERs.

4. Conclusions

Logistic regression analysis showed that MSEs perceptions of benefits and property ownership influence MSEs compliance with ERs alongside other independent variables that included awareness, experts capability and cost of ERs compliance. On perception of benefits of compliance with environmental regulations, a majority of the MSEs considered compliance with environmental regulations to be beneficial to their enterprises. Most of the benefits accrued included cleanliness of the environment, reduction in wastage of raw materials, reduced health risks to the workers and a generally non-repelling ambience to customers. Positive public image and reduced exposure to liability, pollution prevention, creation of competitive advantage and reduction on the need for multiple audits were the other benefits. Entrepreneurs expressed satisfaction with ERs compliance and were hopeful that they would realize tangible benefits within the next six months from the date of questionnaire administration. The study established that property ownership influenced ERs compliance. MSEs that did not own their business premises were not willing to put in place measures needed to meet work place compliance with ERs due to lack of security of tenure.

5. Recommendations

Entrepreneurs' perception of benefits of ERs compliance should be enhanced by interventions from key actors such as NEMA, Government, KAM, media. To enhance enterprises performance and improve quality of the environment, there should be a firm partnership between government as the regulator, entrepreneur and the community. Further NEMA and other stakeholders should investigate possibility of awards for the MSEs which have complied with ERs in order to encourage them and showcase them to others who may not have been so keen and thereby reduce and eradicate negative perceptions and ignorance.

Interventions by Government and other stakeholders should be undertaken to assist MSEs in the reduction of premises costs through increased property ownership by availing soft loans, establishing industrial processing zones and industrial parks addressing the MSEs special problems and encouraging MSEs partnerships on shared business premises.

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