Potential for Positive Socioeconomic Transformation through Rural Industrialization: Evidence from the Magana Industrial Park in Kenya

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Abstract

Social and economic development in rural Kenya has largely been ignored by the market forces and the state although the Third Sector (civil society and non-government organizations) have established operations in those areas. As a result, rural areas continue to experience low growth and high poverty with most of these regions being highly marginalized and disenfranchised. Little efforts have been made to reverse these trends though the new constitution on devolved governance and the strategic plan of Vision 2030 promise positive changes once they are fully implemented. In the new constitutional dispensation, counties will become the new engines of social and economic development mandate to mobilize savings and investments and grow their zones socially and economically. The current study hypothesizes that rural industrial parks may well be the best avenues for promoting the lacking development and achieving social empowerment. Using a sample of 902 households living proximate to a semi-rural industrial park, the study found that indeed local residents highly rated positive impacts of the park on basic services and infrastructures required for economic development. In addition, labour migration heralded positive social interactions among members of diverse ethnic communities and contributed in establishing a 'social synergy' that significantly created harmony, social groupings and business organizations that advanced economic pursuits . These findings support a framework for rural social and economic development as envisioned by Vision 2030. Policymakers should thus consider promoting rural industrial parks to achieve the desired social and economic goals decentralized and devolved governance.

1.0   Introduction

Communities living in rural areas especially in the developing world contend with a number of socio-economic challenges (Kahn, 2000). These challenges, to a larger extent, are as a result of limited access to resources, thus, exposing rural populations to abject poverty and a life of deprivation. This limitation may be as a consequence of an imbalance between available resources and the population or of marginalization by the government in the national development (i.e., underutilization of resources because of the socio-cultural and political structures. Some of the socio-economic challenges faced in rural areas include: unemployment, poor housing, ill health, food insecurity, lack of access to land for cultivation, and illiteracy (FAO, 2002; Grinspun, 2003; MyLott, n.d.). Furthermore, in many countries, the poverty gap between urban and rural areas has been widening (Khan, 2000) with the former attracting more investments in industries. Apparently, the rural poor contend a myriad of obstacles hindering their ability to break the cycle of poverty.

The literature available suggests that there are a number of reasons that can be attributed to rural social and economic underdevelopment in many parts of the world. For example, the rural poor experience higher levels of poverty than their urban counterparts and have much more limited access to basic social services such as sanitation, clean and safe water, healthcare services and basic education. As such, they bear the greatest burden of hunger, ill health and illiteracy (FAO, 2002).

Decline in agricultural output associated with reduction in land size translates to fewer resources for rural residents exacerbating their economic situations. Due to dramatic growth of rural population, pressure has exerted on available land and thus the output per household has declined (Mylott, n.d.). Rural-urban migration has removed the economically able individuals from the rural areas.

Social exclusion rather as opposed to social integration has further disenfranchised most rural areas in Africa. Figueroa (1999) points out that the socio-economic inequalities between rural and urban areas are caused by social exclusion. He clarifies that the social exclusion has the economic, cultural and political elements—where the economic element is associated with deprivation as experienced by rural residents because they have low productive capacities. In addition, Figueroa (1999) supports the hypothesis that economic exclusion from labour participation and in credit and insurance markets for rural people is closely associated with their social exclusion. However, economic empowerment can break the barrier of exclusion, which in this study, is hypothesized to be related with availability of opportunities created by investments in rural industries. Figueroa (1999) concludes that rural development can be achieved if the mechanisms of social exclusion are eliminated or weakened. This paper sought to shed more light on the potential for rural areas to realize growth through increased investments in rural industrial parks.

1.1   Efforts for socio-economic development in rural parts of Kenya

Due to the persistent of rural-urban inequalities in Kenya, the government has embarked on a number of strategic actions and policy interventions to promote the socio-economic growth of the rural areas. Among these strategies is the implementation of sectorial policies. First, creation of the Kenya Rural Development Strategy (KRDS) recognized that agriculture and rural development play a critical role in poverty reduction and achieving economic growth in rural areas. Revamping of agricultural sector is done through increased funding of research and empowerment of women where there is high dependency on subsistence farming to ensure household food security. This reduces undernourishment, provides cheaper credit in the rural areas, competitive input prices, improvement of rural infrastructure, adequate food sector coordination and national food reserve, among other plans addressed by the government (United Nations, 2001).

Second, the implementation of the National Poverty Eradication Programme (NPEP) mandates the government to create adequate employment opportunities by increasing domestic investments and savings to levels sufficient to support desired rates of economic growth and improve livelihoods. This would in turn raise the literacy levels and empower communities to manage their local resources. Although favourable tax regime and general macro-economic environment were put in place to attract investment capital to steer the economy towards a sustainable growth path, there have not been systematic evaluation of the achievement made over the years especially in rural areas.

Other efforts include the implementation of the Vision 2030 which aims to transform Kenya socially, economically, and politically to a medium income nation by 2030. There are three pillars under Vision 2030 namely: social, economic and political. More importantly, the social and economic pillars are fundamental to the economic growth and social development the nation (Government of Kenya [GoK], 2007). The implementation of this strategic plan is underway and its benefits to rural development could be realized in the next few decades.

Enactment of the new constitution in 2010 created a devolved governance structure where the counties will become engines of social and economic development more especially in rural areas. Every county will have its own governance structure identifying the priority areas for development.

It is hoped that the counties will create investor friendly environment based on the natural resources as well as other potential opportunities aimed at transforming the residents of the counties.

1.2   Alternative paradigms to rural development

Reardon (2002) acknowledges that rural households focus on traditional farm and little non-farm income-generating activities. As such, there is great tendency for farm incomes to be equated to rural incomes, and rural/urban relations with farm/non-farm relations. The industrial development has been concentrated in urban areas thus making agriculturalists and investors interested in rural development neglect rural non-farm (RNF) income (Reardon, 2002). Evidence has shown that RNF income generated from activities such as wage-paying activities and self-employment in commerce, manufacturing and services is a significant resource for rural and farm households, the landless and residents of rural towns. The RNF activities in rural areas can potentially improve rural economies and employment.

Although the links between poverty, economic development and income distribution is well documented in the literature (Kahn, 2000), there are a variety of approaches that can be adapted to alleviate rural poverty and consequently generate rural development. Among these are the previously mentioned RNF activities through rural industrialization by setting up rural industrial parks. Industrial parks are important tools that stimulate industrial growth, provide cost-effective infrastructure and communal services. Firms set up in industrial parks benefit from economies of scale in terms land development, infrastructure and common/shared facilities such as roads, utilities, and telecommunications (UNIDO, 1997).

The concept of industrial park though not a well conceived in Kenya especially in the rural areas, is an alternative that the government of Kenya can explore to promote the social and economic development in the rural areas where the majority of the populations reside. This alternative rural industrial approach can only be successful if adapted on a sustainable basis by investing in proper infrastructure and security. Rural industrialization is associated with economic development and rise in mean incomes, which, for the most part, translate into reversal of poverty. Kahn (2000) asserts that inclusiveness of rural areas is critical to the political and social integration, key ingredients to rural development. Kahn further identifies that capital-intensive, import-substituting and urban-biased growth processes based on policies of trade, pricing and public expenditure have not been successful in addressing rural poverty.

1.3   Theoretical framework: the growth pole theory

The study employs the growth poles theory for social and economic development. According to this theory, the interests between the centre and periphery are modestly controversial. In this case, the centre is the government policy makers while the periphery is the rural marginalized areas. A change can only happen if there is an integration of the periphery into the overall system. That is, if the marginalized rural development is integrated into the overall national development through aggressive strategies and effective policies. This approach may demand that society becomes aware of the socio-economic problems experienced in rural areas and create suitable political and economic climates which could result in more resource allocations to promote growth in rural areas.

1.4   Conceptual framework

The relationship between the elements of social and economic development suggests that the model of rural industrialization can potentially transform those areas. The schema in Figure 1 below shows

the interrelationship between the socio-economic elements and the consequent rural industrialization. As Reardon (2002) advises, there are several reasons why policy-makers in developing countries can embarked on strengthening the activities that promote rural non-farm income. Although Reardon model is purely economic, this study extends its analyses to social variables that are required for cohesion of an ethnically and economically polarized society such as Kenya.
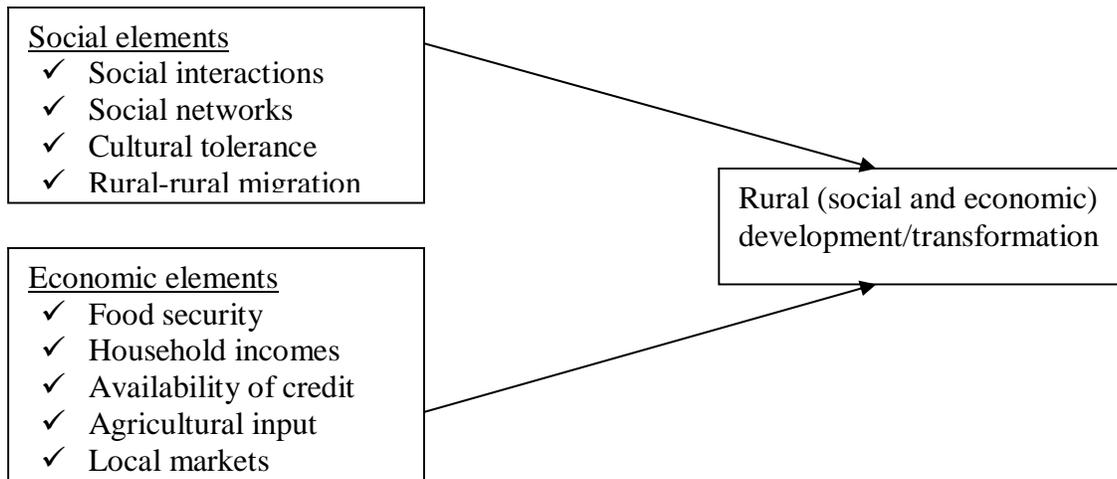
Social elements
- ✓ Social interactions
- ✓ Social networks
- ✓ Cultural tolerance
- ✓ Rural-rural migration

Economic elements
- ✓ Food security
- ✓ Household incomes
- ✓ Availability of credit
- ✓ Agricultural input
- ✓ Local markets

Rural (social and economic) development/transformation

Figure 1: Conceptual schema showing the social and economic elements for rural development

The current study attempts to fill the knowledge gaps on how rural industrialization through creation of rural industrial parks can transform rural regions socially and economically. As explained earlier, Kenya has a strategic plan to enable it become a middle-income nation by the year 2030 through the blueprints set in the national Vision 2030. Under this visionary strategic plan, the economic pillar aims at improving the prosperity of all Kenyans through economic development programme anchored on a GPD growth rate of 10 percent per annum and the social pillar aims to build a just and cohesive society with social equity in a clean environment (GoK, 2007). As such, rural industrialization may potentially steer the nation to achieve such aspirations. The models of rural industries currently in place in Kenya are not well documented. The current study therefore attempts to fill this gap by investigating how residents of a peri-urban industrial park are impacted by its presence. The study hopes that similar impacts are likely to be realized in other rural areas which will become the targets of social and economic development in the new constitutional dispensation. Two hypotheses are thus explored in this study. First, the industrial parks are likely to lead to improved infrastructure such as roads and growth of basic services such as health, security and education necessary for economic development. Second, industrial parks are important enablers of labour migration and social interactions required to maintain social justice and cohesion of the society in accordance with the social pillar of Vision 2030.

1.5   Methodology
Data collection and sample size
The study employed a mixed method approach to study the social and economics of a peri-urban industrial park outside Nairobi. It is the only industrial park in Kenya that is set in what can be

considered somehow rural. A survey questionnaire was administered to residents of the impact zone of the industrial park with additional ones administered in non-impact zones, leading to two independent samples. The main questionnaire drew a sample of 902 household respondents from 9 villages which were believed to be the impact zone of the industrial park. A further 100 household respondents came from a control village outside the industrial park due to the distance from it and possibly availability of other opportunities in the city of Nairobi. All the questionnaires were administered face-to-face by trained research assistants. The sample was drawn proportionately based on the population size estimates of the respective villages given by the local provincial administrators. In addition, qualitative methodology involved collection of data using key informants interviews with 14 informants and 5 focused group discussions (FGDs). Raw qualitative data was used to provide supplementary and supporting explanations to the findings from statistical analyses.

Measures
The study employed measures that were used as both dependent and independent variables for the statistical modeling and other analyses.
Dependent variable
Relationship with Magana industrial park was measured by asking the respondents whether they had a relationship with the park. There were two response categories with 'Yes' being coded as 1 and 'No' coded as 0.
Independent variables
Rating for security – this variable was measured by asking the respondents to rate the impact of the industrial park on the security of the local area on a scale of 1 – 10.
Rating for food security – the variable was measured by asking the respondents to rate on a scale of 1 – 10 how the industrial park had impacted their food security.
Rating for electricity – the measurement of this variable involved asking the respondents to rate how the industrial park has impacted on energy in form of electricity in the area on a scale of 1 – 10.
Rating for education – to measure this variable, the respondents were asked to rate how the industrial park has impacted education in the area on a scale of 1 - 10.
Rating for water – the measurement of this variable involved asking the respondents to rate how the industrial park has impacted on the water to the residents on a scale of 1 - 10.
Rating for health – to measure this variable, the respondents were asked to rate how their health has been impacted by the presence of the industrial park on a scale of 1 – 10.
Rating for housing – the respondents were asked to rate on a scale of 1 – 10 how the industrial park has impacted housing in the area surrounding the park.
Views on interactions – the respondents' views on whether the presence of the industries around the area has greatly changed the way individuals interact. The variable had 5 response categories coded as '1' for Strongly disagree, '2' for Disagree, '3' for Neutral, '4' for Agree, and '5' for Strongly Agree.
Views on crime – the respondents' views on whether the presence of the industrial park has led to the escalation of crime on
Length in community – this variable asked the respondents to record the number of years they have lived in the community surrounding the park.
Data analysis

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Quantitative data was analyzed by describing the distribution of the key social, economic and demographic characteristics of the respondents. Bivariate analysis employed chi-square test to examine the second hypothesis for the populations that had relationship with Magana industrial park within the impact zone of the park. The first hypothesis was evaluated using a binary logit model where the relationship with the Magana industrial park was regressed on a string of impact and other variables.

2.0 Findings

The findings from the study summarized the characteristics of the respondents and showed support for both hypotheses that were examined. The social, economic and demographic information of the respondents are presented in Table 1 below.

Table 1 – Key social, economic and demographic characteristics of the respondents

Variable		Percent (%) or Mean (SD)
Sex	Male	51.4 %
	Female	48.6 %
Age	Below 20 years	3.2 %
	20 - 24	15.2 %
	25 - 39	49.9 %
	40 - 54	21.6 %
	55 - 59	3.9 %
	60 - 64	2.6 %
	65 and above	3.6 %
Education	No Education	3.5 %
	Primary	28.5 %
	Secondary	48.2 %
	College	17.4 %
	Tertiary	2.5 %
Monthly Household Income (Ksh.)	Less than 5,000	22.7 %
	5,001 - 10,000	28.2 %
	10,001 - 20,000	29.5 %
	20,001 - 50,000	17.3 %
	50,001 - 100,000	2.1 %
	Above 100,000	0.5 %
Employment status	Employed	24.9 %
	Self-employed	38.3 %
	Not employed	36.8 %
*Migrant (from other counties)	Yes	40.4 %
	No	59.6. %
Length in community (years)	-	20.02 (17.48)

*There was only one non-Kenyan immigrant

The sample drawn was even in terms of the gender of the respondents –51 percent were males and 49 were females. Majority of the respondents were in the economically productive age groups and a

minority proportion were either below 20 years or above 60 years of age. Indeed, approximately 10 percent were outside what is considered economically active age. Of those within economically productive age bracket, half of them were in the 25 – 39 age group while about one-fifth were in 40 – 54 years. The age distribution shows that most of the residents in the area were in the middle age and would be able to seek employment at the park or tap on other business opportunities that may arise in the area. The distribution on education shows that only a very small minority (3.5 %) had no education at all. Those with primary level of education were slightly over a quarter of the respondents while another close to half had secondary level of education. College educated respondents comprised 17.4 percent while those with tertiary vocational education were only 2.5 percent. The distribution of level education of the respondents show that would be typically semi-skilled manpower required for industrial production jobs. Only a small proportion was skilled being the workforce required for management and other professional jobs for industries.

The distribution of household incomes depicts a grim outlook of the economic situation of the respondents. About half of the respondents reported to earn less than Kenya Shillings 10,000 a month. About 30 percent of the respondents reported earning between Ksh. 10,000 – 20,000 while 17 percent earned between Ksh. 20,000 and Ksh. 50,000. Those with household incomes above Ksh. 50,000 were only a minority of 2.6 percent. Again, the income distribution corresponds to the education (or skill) level for industrial workers. A further analysis between income and education distribution produced a statistically significant chi-square value of 397.5 supporting the fact that education and income had a relationship. Employment status showed that a quarter of the respondents were employed while 38 percent were in self-employment and 36 percent had no employment.

Migrant labour (migration of skilled and unskilled workers) is common in industrial zones. 40 percent of the respondents reported to have migrated from other parts of the country while 60 percent were native of the community where the industrial park is located. Length of stay in the community surrounding the industrial park had a mean of 20 years and a standard deviation of 17 years meaning that most of the respondents had lived in the community for a few years. A further analysis using t-test showed a significant mean difference of the length of stay in the community for the migrants and natives. Migrants had a mean of 9.2 years and the natives had a mean of 27.4 years. It clearly shows that migrants have arrived in the area in the recent years to pursue employment at the industrial park.

To test the first hypothesis on improved infrastructure and growth of basic services due to industrial park, the analysis employed logit model to regress the relationship with the industrial park on a range of impact measures. The outcome reported in Table 2 below shows the support for the first hypothesis.

Table 2 – Relationship with Magana Industrial Park Logit Model for Economic Indicators of Impacts

Variable Name	Parameter Estimates	Std. Error	Wald X^2	DF	*p*-value	Odds Ratio	95 % CI	
Intercept	-1.440	0.1922	56.114	1	<.0001***	-	-	-
Rating for Security	0.1556	0.0351	19.693	1	<.0001***	1.168	1.091	1.251
Rating for Food Security	0.0816	0.0422	3.7303	1	0.0504*	1.085	0.999	1.179
Rating for Electricity	0.0082	0.0432	0.0363	1	0.849	1.008	0.926	1.097
Rating for Education	0.0196	0.0500	0.1546	1	0.6941	1.020	0.925	1.125
Rating for Water	-0.1921	0.0424	20.499	1	<.0001***	0.825	0.759	0.897
Rating for Health	0.1774	0.0528	11.307	1	0.0008***	1.194	1.077	1.324
Rating for Housing	0.0281	0.0377	0.5538	1	0.4568	1.028	0.955	1.107
		Chi-sq.	DF	*p*-value				
	Likelihood Ratio	107.4973	7	<.0001***				
	Wald	91.5396	7	<.0001***				

*p<.05, **p<.01, ***p<.001

The logit model for the relationship with Magana Industrial park showed a number of statistically significant correlates that the residents felt that the park had impacted their lives. These findings support the hypothesis that industrial parks may have impact on basic services such as health, water provision, food security, and general security although impacts on education and electricity were not significant. Growth of basic services is necessary for economic and social development which has been lacking in the rural areas in Kenya and elsewhere in Africa.

Generally, the security of the community was found to have improved due to the presence of the industrial park. For the respondents who reported to have a relationship with the park, their odds for higher rating for security increased by 16 percent. That is, the residents with relationship with park had 16 percent higher odds for rating higher impact of the security due to the presence of the park. These findings were affirmed by independent participants of a focus group discussion drawn from the same community who pointed out that Magana industrial park has improved the security of area, both for the enterprises and the community. They reported that an administration police camp has been established and security surveillance has increased through support of the provincial administration office. Security is very critical for any meaningful development to happen. For example, a respondent reported that the residents safety as well as for the enterprises has improved due to the presence of administration police camp and provincial administration office in the area.

Closely related to the impacts of the industrial park on the general security was food security. Although the finding had a borderline level of statistical significance, residents who reported to have a relationship with the industrial park had 8 percent higher odds of rating their food security highly. That is, the presence of the industrial park may be associated with opportunities for improved food security for the households in the area due to improved incomes, where, 80 percent of the respondents indicated that their income had improved and a positive correlation was reported between these two variables ($r = 0.16$). Rural areas that are food insecure have low levels of development. However, improved food security may be an indication of positive prospects for development (Sutherland, et al., 1999). As found in this study, if industrial parks are set in the rural areas of Kenya, the incomes of resident will definitely improve as well as their food security. This is

mostly areas that have perennially been food insecure but industries can thrive due to availability of raw materials and inexpensive labour.

Access to healthcare services is critical for socio-economic development because it reduces ill-health providing opportunities for residents to participate in development activities. The findings from this study showed that having a relationship with Magana industrial park raised the odds of higher rating of health services by 19 percent. In other words, respondents who reported to have a relationship with the industrial park also felt the park had an impact on their health. However, further probing of the health impact show there were both positive and negative impacts. For instance, a majority of residents had felt that the industries affected their health negatively due to industrial waste and contamination of the water sources. Others reported respiratory and upper tract health problems or even physical injury yet the enterprises had not adequately insured the workers. To the positive, some respondents reported to have enjoyed free health care services provided by an employer sponsored health care facility and benefitted from community health screening programmes (for instance breast, cervical and prostate cancer, HIV/AIDS, etc) and referrals for those found with health issues. Due to the mix of findings on health impacts from qualitative open-ended comments from the respondents, future research should focus on investigating the particular impacts of health.

Three indicators were highly significant but were found to have lower odds for the respondents who reported to have a relationship with the industrial park. Rating for water, rating for housing and the length of stay in the community were associated to have lower odds. For residents with a relationship with Magana industrial park, there were 18 percent lower odds for a higher rating of the impact of the industrial park on the water. In other words, the presence of industrial park was not associated with provision or availability of safe and clean water to the residents. Two reasons are prominent to this finding. Examination of open-ended qualitative data found that there were a number of community-based water projects. More than 90 percent of the respondents had reported they have access to piped water provided by community-based and self-help group projects. Communities were found to be more involved in provision of water than the other indicators that were modeled in this analysis (i.e., security, food security, electricity, education, and health). This is a case where communities can be involved in the development of their own areas.

The second reason for lower odds of rating for water was as previously indicated that the residents reported that there were negative health and environmental impacts where industries pollute water sources. As a result, residents may have looked for alternative sources of safe and non-polluted water. An examination of the water sources in the area was found that most of the residents including those getting water from community projects identified their sources as boreholes. A very small minority was found to draw water from the rivers and springs surrounding the park, indicating that they were cautious about their health. The model employed by the resident to provide water (where more than 90 percent reported to access to piped water within a short distance of less than 50 metres) clearly indicates that if residents are empowered, they can supplement government and municipal efforts in the provision of essential and basic services.

Housing is another indicator, although not statistically significant, could potentially be impacted by an industrial park set up in a community. There are two ways in which housing growth could be fostered. One, real estate developers could be encouraged to invest in houses for the industrial park workers and two, workers' disposable income is likely to improve and consequently improve their housing. Data from the FGDs indicated that the local land owners had converted their parcels into housing apartment complexes and workers would rent them. However, FGDs participants also

lamented that low pay among industrial park workers has lead to sprouting of slum-like structures which was never the case before in the area. Future research into the impacts of rural industries on the housing should employ measures that reflect on such impacts.

The second hypothesis was to examine parts of the social pillar of the Vision 2030 on the just and social cohesive society for social development of the regions of Kenya.

Table 3 – Relationship with Magana Industrial Park Logit Model for Social Indicators

Variable Name	Parameter Estimates	Std. Error	Wald X^2	DF	*p*-value	Odds Ratio	95 % CI	
Intercept	-2.0034	0.4551	19.3745	1	<.0001***	-	-	-
Views on caring for others	0.2072	0.0789	6.8972	1	0.0086**	1.230	1.054	1.436
Views on crime	-0.1089	0.0679	2.5701	1	0.1089	0.897	0.785	1.025
View on cultural conflict	0.0062	0.0628	0.0097	1	0.9217	1.006	0.89	1.138
View individualism	-0.0372	0.0741	0.2524	1	0.6154	0.963	0.833	1.114
Views on interactions	0.2771	0.0833	11.0696	1	0.0009***	1.319	1.121	1.553
Views on livelihoods	0.0632	0.0751	0.70800	1	0.4001	1.065	0.919	1.234
Years in Community	-0.0130	0.0045	8.2490	1	0.0041**	0.987	0.978	0.996
			Chi-sq.	DF	*p*-value			
Likelihood Ratio			54.0943	7	<.0001***			
Wald			48.9218	7	<.0001***			

*p<.05, **p<.01, ***p<.001

The logit model in Table 3 shows a number of significant correlates that support the second study hypothesis.

Social interactions and cohesion among the diverse Kenyan communities is one of the realms envisioned by the social pillar of the Vision 2030 strategic plans. Ethnically diverse workplace is one of the ways of social cohesion that is necessary for national development can be advanced. The current study sought to underscore the importance of social cohesion by examining respondents' views on interaction with people from other regions of the country. The respondents who reported to have a relationship with Magana industrial park had 25percent higher odds of agreeing that their views of interactions with people from other ethnic communities have changed for good. The industrial park was found to have attracted migrant labour from across Kenya, making it diverse. This thesis was supported by the data from FGDs where participants reported to have become more tolerant with members of other ethnic groups. This finding is very critical to the devolved Kenya governance structure where counties will become engines of development and, if industrial parks are set in those areas, the eandeavours of social integration and cohesion will likely be achieved.

The number of years that respondents lived in the community was found to have 2 percent lower odds. That is, the longer one lived in the community, the less likely they were to have a relationship with Magana industrial park. As a matter of fact, one would expect that the local residents to be appreciative of the conglomerate of industries in their areas for the benefits associated with it. Although this was a surprise finding, there were a number of reasons that supported it from data of the focus group discussions (FGD) and open-ended data in the questionnaire. The FGD participants

reported that most of the industries exploit their workers and have low wage levels as compared to others such as construction work and self-employment in small business. They further reported that most of the workers in the factories are immigrants from other parts of Kenya.

Our data also showed that most of the immigrant workers to the industrial park come from resource deprived parts of Western and Eastern Kenya and not the Central province which is relatively endowed with resources. Local residents would thus shy away from the low pay and engage in other activities that generate more income. However, if such industries would be set up in the resource poor areas of Kenya, they are likely to have multiplier effect and transform those areas, reducing labour immigration. Also surprising from this analysis is that rating for education and electricity were not significant correlates yet they are very crucial for socio-economic development of the rural areas. Education provides the human capital required for social development (Kinyanjui, 2012) and electricity provides the energy for industrial production associated with socio-economic transformation. Future studies should investigate these two correlates and use different measures other than the ones employed in this study.

2.1   Discussion and conclusion

The findings from this study are clearly indicative that there are opportunities for social and economic development in rural areas of Kenya. Such industrial parks which comprise of private enterprises set up in rural areas with infrastructural support from government are more likely to transform the communities. This exemplifies public-private partnerships as models of rural development. From the study, it was found that rural industries are associated with benefits such as provision of clean water, electricity, road construction, and support for education and health services as well as creation of employment opportunities and growth of small businesses.

In addition, the community-based (or local actors) alternative approaches to development are likely to supplement government's efforts (or state actors). For example, the growth of microcredit groups (*chamas*) provides capital for small businesses and thus reducing high levels of poverty associated with limited opportunities in rural. Consequently, this drives down crime and attracts more investments to the industrial zones. In addition, rural industrial parks were found to encourage labour migration across the counties which contribute positively to cohesion among various socio-cultural and ethnic groups of Kenya. As the second hypothesis suggested, the endavours of the social pillar of Vision 2030 can be promoted through rural industrialization as a result of labour migration. Thus, such ventures should be encouraged for both social and economic transformation of rural areas.

One major shortcoming of the study is that the model of rural industrialization studied could not be clearly understood because the Magana industrial park is set-up in a peri-urban area which may also attract immigrant labour due to proximity to Nairobi. This may further be complicated due to the fact that there are no known rural based industries parks that similar studies could be conducted to establish the social and economic impacts. However, the findings from this study clearly indicate that there are benefits that are likely to accrue from conglomerates of industries in rural areas.

2.2   Implications for policy

Although the government has implemented sectorial policies such as Kenya Rural Development Strategy (KRDS) and the National Poverty Eradication Program as interventions to rural poverty, their successes have not been adequately documented. Even though such policy interventions were aimed at transforming rural areas economically and social and create sustainable communities, they

are likely to be faced with resistance or even mismanagement. However, rural industrialization should be encouraged because they involve establishments by private enterprises with support from government with basic infrastructure and services.

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