Examining the Socio-Economic Contribution of Cut-flower to the Local Economy in Naivasha Flower Basin, Naivasha Sub-County

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Abstract: *This study examines the socio-economic contribution of the cut-flower sector to the local economy inNaivasha flower basin. The study used descriptive survey design.The questionnaires and structured interviews were methods of data collection used. Simple random sampling was used to administer household questionnaires while interviews were done through purposive sampling. Statistical packages for Social Sciences version 19, was used to analyze data. The results showed that the cut-flower industry is a major contributorin terms of employing the locals and enhancing physical infrastructure. This paper will be useful to all cut-flower stakeholders especially with great focus on eliminating the challenges in the sector.*

Keywords: Socio-economic, Local economy, Cut-flower, Naivasha Sub-County

1. Introduction

Kenya is striving to be an upper middle-income economy with an annual 10% growth while implementing the three pillars among them the economic pillar. Agriculture sector has been the country's main economic stay, which is generating income to the country as well employing many citizens. The contribution of the cut-flower sector into the country is enormous and is key in driving Kenya's economic growth. The flower farming in Naivasha basin covering approximately 1200 ha accounts for 40% of Kenya's cut-flower exports and generate approximately 8% of the country's foreign exchange revenue(1). The cut-flower sector isthus a huge opportunity for the country both national and county government of Nakuru to turn around the local economy through investing in the sector adequately and protecting related resources like L. Naivasha.

2. Literature Survey

2.1 The contribution of cut flower

Kenya's floriculture contribution increased to 305 billion in 2017 and is employing approximately 500,000 people [1]. In the US, for instance, California being the leading flower producing state, is accounting for 80% of the country's production thus improving the regional economies where in 2015, the direct value output was $ 350 million and direct labor being $ 145 million[2].

Cut flower industry supports Kenya making it the tops leading African economy providing source of income to many citizens[3]. Economic indicators too are showing a steady rise in the significance of the flower industry to the Kenyan economy with the share of export volumes and value of fruits, nuts and cut-flowers increased in the first quarter of 2017[3],[4]. Kenya is to become a upper middle income economy by 2030 and is implementing Vision 2030 through its medium Term Plans and Agriculture is one of the sectors under the economic pillar that is supposed to drive the economy growth by 10% [5].

Flowers are thought to positively affect the mental state of some people while ornamental flowers are an economic sense in that overally across the world the cut-flower industry is worth $ 40 billion annually benefitting indirectly retailers and other businesses to woo potential customers[6]. The sector have challenges that is bedeviling it in that in 2017, prolonged drought affectedthe production though there was a total export increase of 9.4% in the first quarter that year [4],[1].

2.2 Challenges facing the cut-flower industry

Increases in freight cost and potential discontent from potential customers pose challenges to the sector[7]. Other challenges are that, the staff turnover with most workers being women is poor, harvesting a lot during given period might lead to dry-up and loss due to inadequate storage facilities, buyers demanding more flowers than it is readily available and poor remuneration and working conditions of workers[8].

Also in Lake Naivasha basin for example which accounts for 40% of Kenya's cut-flower, Karait slum cost of living tend to be high, coupled with poor houses and sanitation[9]. Workers receive poor pay with the trade unions rarely carrying out their role of safeguarding worker's welfare in the cut-flower industry in Kenya[10]. However the basin include an economy of a broad group of stakeholders like large horticulture companies and their employees, the out growers and small holders, local government and basin inhabitants [11],[1] supporting a local economy of almost 650,000 people. The contribution of floriculture to the L. Naivasha local economy is approximately $ 180 million annually

3. Materials and Methods

3.1 Study area

The study was done in Naivasha Sub- County, Nakuru County. The geographic coordinates of the site are0.717°S 36.433°E. It was carried out within the flower farms in the

L. Naivashathat has an altitude of 2086 m. The flower farms are in proximity to L. Naivasha and Naivasha town. The area enjoys a favorable climate, good accessibility, fertility of soils and sufficient water from L. Naivasha. A lot of rain falls in April to August with January on average being the driest month. Naivasha has an average temperature of 23.5 degrees Celsius.

3.2 Research design and methodology

The study used descriptive survey design. Key respondents included local community, traders, flower firm managers and workers and official from the County government of Nakuru. The questionnaire and interview schedules were used in collecting primary data.

3.3 Sample size

The target population for the study was 28738 [12]. The sample size was determined using[13]formula as follows;

$$n= \frac{NCv^2}{(Cv^2 + (N-1)\ e^2)} \qquad (1)$$

Where n= sample size
N=population
Cv= Coefficient of variation (take 0.5)
e=Tolerance of desired level of confidence taken as 0.05 % at 95 % confidence level

$$\frac{28738*0.5^2}{(0.5^2 + (28738-1)\ *0.05*0.05)}$$

Therefore, the sample size was 100.

3.4 Sampling design

The household questionnaires were administered using Simple random Sampling. The interviews were conducted by the use of purposive sampling where department of agriculture officials, flower firm managers, County revenue officials, NEMA and Kenya Finance Corporation official were interviewed.

4. Results and discussions

4.1 Cut-flower contribution

The study noted that, 23% of the respondents acknowledge cut-flower farming as providing employment to the locals. 21% said the proceeds from the flower firms had become a great income earner for them and that they were getting empowered socio-economically. In terms of poverty reduction which is one of the components of Kenya'sVision 2030 under economic pillar, the study revealed that floriculture practices were ameliorating them from poverty (17%). It emerged also that 20% perceived cut-flower farming as the biggest contributor to physical development in Naivasha Sub-county, that is, education infrastructure, water supply, roads construction, energy, health facilities among other sectors. The study however found out that, the flower firm workers were not living in good housing conditions despite them having secured jobs from the flower firms.
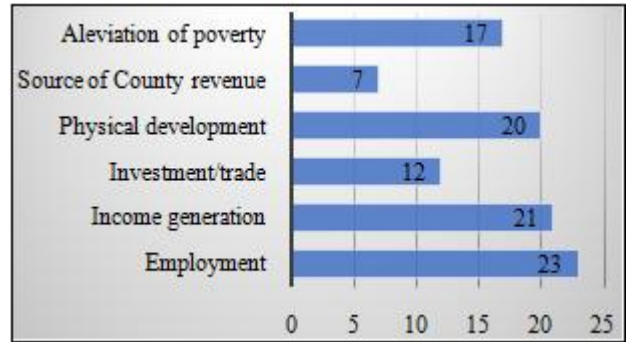

Figure 1: Contribution of floriculture to local economy

4.2 Social challengesfacing cut-flower industry

From the study it emerged that flower firms workers were getting low wages (30%) where majority of them were casuals (27%). The workers are experiencing a lot of health risks (16%) due to the chemicals used in flower firms like the pesticides. The majority of the workers in flower firms are women and this makes sexual harassment (22%) to be high. The minority (5%) said that there was no freedom of expression since workers fear intimidation and dismissal from work.
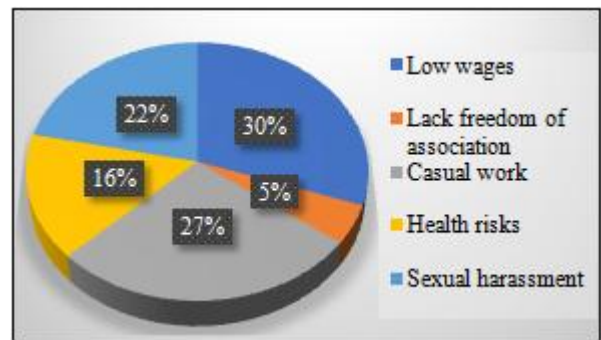

Figure 2: Social Challenges facing cut-flower workers

4.3 Environmental challenges

Majority of the respondents (33%) noted that pollution of Lake Naivasha was the main challenge facing the basin. Chemicals from flower firms were being swept into the Lake which was posing a threat to the lives of the people depending on the lake for livelihood especially the fishing industry. There was unsustainable use of the water (27%) from the Lake Naivasha to perform the flower firm activities. There was a notable decrease in plant and animal species (18%) because soil contamination (22%) from the chemicals used in the farms were considered to be destroying the soils.
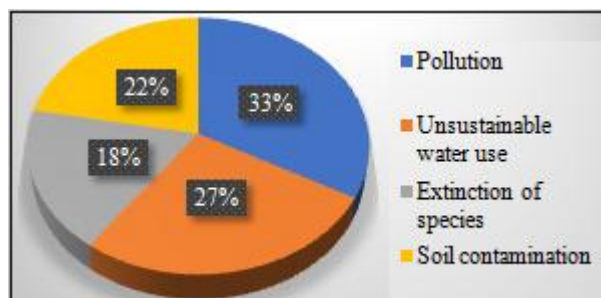

Figure 3: Environmental challenges

5. Conclusion

This paper gives an assessment of the cut-flower industry in Naivasha Sub-County and especially how it is transforming lives in the Naivasha basin. It is useful to the National Government agricultural agencies and the County Government of Nakuru in trying to implement the governments 'big four' among them manufacturing and the Vision 2030 under the economic pillar. Improving the local people's livelihood and empowering them will go a long way in transforming local economies and creating a stable National economy in the long run.

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