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SITUATION OF SOCIOECONOMIC RIGHTS OF FARMWORKERS IN THE CUT FLOWER PRODUCTION IN NORTHWEST ETHIOPIA

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ABSTRACT

Floriculture is one of the booming sectors in Ethiopia. This sector has been identified as one of the industries with an opportunity to grow and contribute positively to the economic growth of Ethiopia. However, socioeconomic rights have been largely neglected and effective enforcement mechanisms in the sector are still lacking. Therefore, the main objective of this study is to assess the situation of socioeconomic rights of workers in cut flower production of Northwest Ethiopia. Qualitative and quantitative methods of data analysis were used for the study. The findings of the study showed that many of the workers' rights were violated such as lack of appropriate payment, lack of training, lack of regular medical checkup and monitoring of workers health and safety sit**u**ations among others. This paper also found that some flower farms have had a significant effect in improving working conditions, but that wages remain low and freedom of association is often limited. Securing the sector and economic sustainability and climate-resilient investments are not conflicting, but rather mutually reinforcing. Trade-offs in the management of conflicting environmental, social or economic goals should always be considered in the light of principles of sustainable development. The study recommended that all actors in the global cut flower chain have an interest in integrating sustainability issues, but seemingly differing mandates and the lack of institutional links are hindering a timely and well-informed discussion. Governments cannot succeed alone, but it should be in the driver's seat. Civil society offers a wealth of expertise, knowledge and implementation experience. The green consumer is also becoming environmentally and socially conscious. This scenario supports the inclusion of punishing business for unfavorable behavior and rewarding business for favorable behavior measures in future.

Keywords: Cut flower, socioeconomic issues, farmworkers, human rights, Ethiopia

INTRODUCTION

The Ethiopian flower industry represents an extraordinarily fast and successful diversification into a non-traditional export product for a better socioeconomic sustainability and sustainable development. Historically, the first private floriculture companies were called Meskel flower and Ethio–flora started activities around 1997 on a few hectares of land. Today, there are around 84 companies growing cut flowers, mostly roses followed by summer flowers and cuttings. Out of these, 52 are funded through foreign direct investment (FDI), while 26 are local companies and six are joint ventures (EHPEA 2015). The rapid growth of floriculture in Ethiopia is due to the country's favourable climate, natural resources, the extensive support to attract foreign direct investment (FDI) from the government and the abundant availability of labour (Belay et al., 2017). Therefore, all these factors have contributed to Ethiopia the new spot of floriculture industry in Africa (Belay et al., 2017; EHPEA 2016). Currently, cut flower production has made Ethiopia the second-largest producer in Africa next to Kenya and fourth largest flower exporter in the world within the last five years (Taylor, 2010; Gebreeyesus and Iizuka, 2012). The sector contributes major share of the national economy. For instance, the earnings from the floriculture sector amounted to more than 131 million USD in the year 2009 The value increased from USD 221.89 million USD in 2001 to USD 660 000 million in 2012/2013. In 2013, the sector generated total earnings of about USD 265.7 million and this is expected to reach USD $550 million by the end of 2016 (The Reporter 2014; EHPEA, 2016). For Ethiopian flowers, the EU is the main export destination. Besides, the flower industry is among the most important export industries in Ethiopia, employing more than 80,000 workers. Currently, more than 70% of Ethiopia's floriculture products go to the Dutch market and from there these flowers are re-exported to other EU countries and beyond (Getu, 2009; EHPEA, 2015). It also exports to Germany, Britain, and Russia and, in smaller amounts, to the United States and the Middle East.

Although the flower production generates economic advantage and employment opportunities, social problems related to workers' rights, health and safety issues are also growing. Hence, one of the issues which floriculture industries in Ethiopia commonly blamed is unsafe working conditions of floriculture farmworkers associated to massive chemical usage of the industry. In addition, the flower production uses different types of pesticides that can potentially be harmful for human health. The chemicals can cause skin problems and other reproductive illnesses, which can be risky to women's lives. Workers exposure is of particular concern in greenhouses, where up to 300 different chemicals are used in enclosed spaces-increasing risk of exposure through the skin and by inhalation (Sisay, 2007).

It is understandable that the cut flower production in Ethiopia has substantial social and economic benefits but this fast-growing industry is claimed by workers to have several social and economic concerns. Studies conducted in developing countries such as in Kenya (Hale & Opondo, 2005; Leipold & Morgante 2013; Dolan et al., 2003), in Rwanda (UWEA, 2006), in Colombia David 2002; Sepulveda 2004), among others provided a general over view of economic, social and environmental impacts of floriculture production. Similarly in Ethiopia different studies conducted by (Getu, 2009; Nigatu, 2010; Weldeghebrael, 2010; Gudeta and Degitu, 2012; Belay, 2017) on floriculture production and they revealed its positive and negative impacts. However, little research has explored on the situation of socioeconomic rights among farmworkers in the cut flower production from human rights perspectives. In particular, the working conditions and health status among

farmworkers in Ethiopian flower industry are not documented. Therefore, this study is aimed at assessing socioeconomic rights and working conditions of workers in cut flower industry in North West part of Ethiopia.

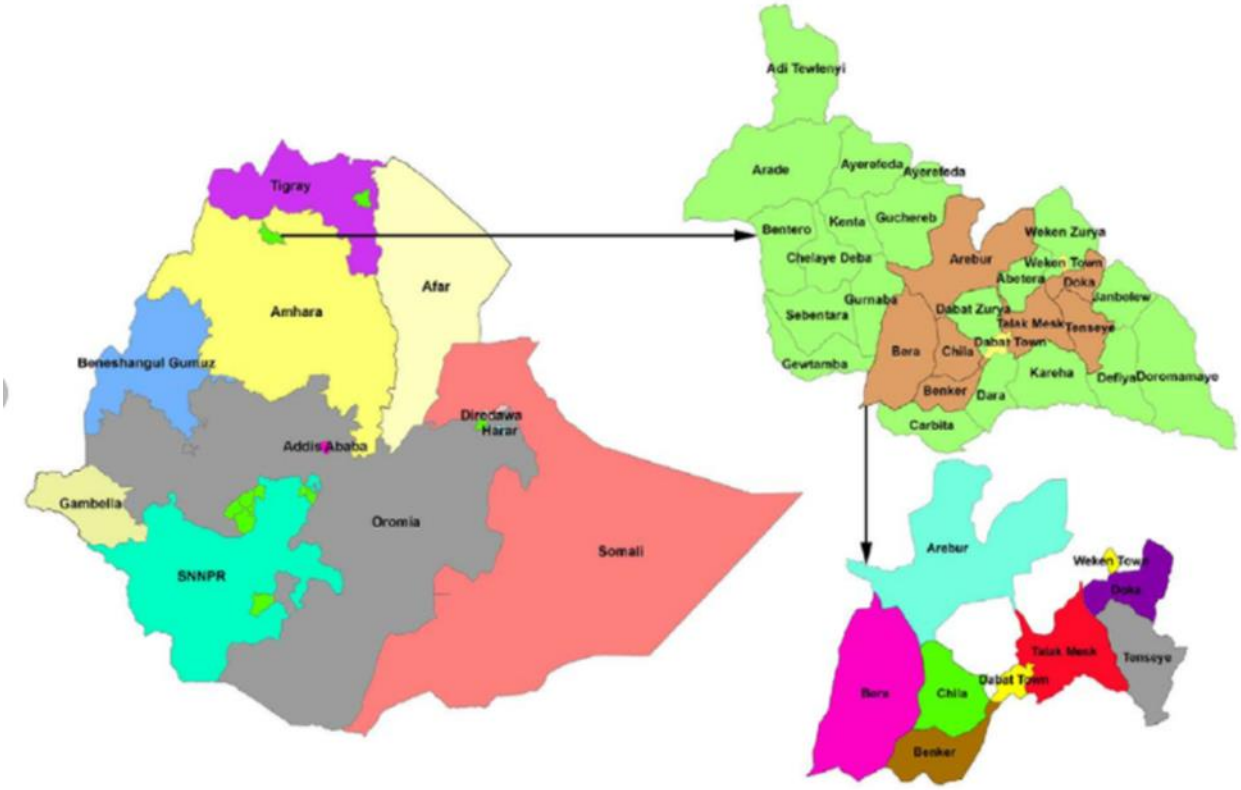

Figure 1: Map of the Northwest Ethiopia
Source: Own construction, 2019

LABOR PROCLAMATION OF ETHIOPIA AND EHPEA CODE OF PRACTICES

Ethiopia has ratified ILO's core labor conventions and the general principles of labor rights are also an integral part of the constitution. The national labor law which is the primary means of state intervention goes in conformity with the international conventions. International labor standards have also been instrumental in shaping national labor proclamation No.42/1993 which was developed in the post-socialist time following the adoption of market oriented economy (ILO 2014). The country's parliament has also ratified 12 technical conventions that are notable in protecting the right of workers. The latest national labor proclamation No.377/2003 was further amended to include freedom of association and protection of unions from interference by public authorities including protection from cancellation (Nigatu, 2010; ILO, 2014).

The current labor proclamation protects women and men on equal rights to employment and related entitlements such as equal pay for equal work, promotion and pension entitlements (Nigatu, 2010; Ute, 2013). There are also gender specific

issues included in policy and legal frameworks such as the right to 30 days of prenatal and 60 days of maternity leave with full payment. The criminal code outlaws sexual harassment and prescribes imprisonment of the perpetrator (Art. 625). In this regard the national labor proclamation and criminal code meet international gender sensitive legal instruments such as Convention on the Elimination of Discrimination against Women **(**CEDAW) which is laid out to deal with specific problems of women (Nigatu, 2010; ILO, 2014).

Even though Ethiopia ratified international labor conventions and adopted into national labor proclamations, there are challenges when it comes to adherence to core labor standards that was expected to be sustainable. Studies such as Ute, 2013; Weldeghebrael, 2010; Nigatu, 2010 conducted on labor practices and conditions of work in Ethiopia found that labor conditions tend to be low. This was because of two main reasons: (i) there are lower standards in labor laws and regulations because of the changes made in the advent of trade liberalization; (ii) there is also a lack of capacity for effective enforcement of existing labor laws. Similarly, when assessing the Ethiopian labor proclamation in view of the above mentioned international labor convention; working conditions and labor arrangements tend to be flexible particularly in areas such as minimum wage, working hours, health and safety (Ute, 2013). The labor proclamation No. 377/2003 leaves both wage and contract terms open to be determined by the market with the backdrop of flexible labor ideology (Ute, 2013). There is also no separate legislation for a minimum wage in Ethiopia and the law is open for the use of a wider variety of temporary employment contracts up on the agreement of the parties involved (Decent Work Check, 2013).

In addition, associations of flower producers in developing countries are increasingly active in introducing standards and codes of practice (Joosten 2007; BTC 2010). In 2007, the EHPEA developed the EHPEA Code of Practice (EHPEA-CoP). This is a voluntary standard developed to guide, monitor and communicate the social and environmental performance of flower farms engaged in export production for sustainability and sustainable development. The code set requirements for good agricultural practices, protection of the environment, worker welfare and employment practices at three levels: Bronze, Silver and Gold. The Bronze-Level Certification includes basic legal requirements and key issues relevant for the market and local stakeholders; the Silver-Level Certification is broadly similar to Global-GAP for flowers and ornamentals and contains social components equivalent to the Good Social Compliance of the ETI standard and MPS-SQ. EHPEA Gold-Level Certification requires a farm to be active in the implementation of Corporate Social Responsibility (CSR), product quality management and capacity building for the sector.

RESEARCH METHODS

This research was conducted in three flower farms among the total of the five farms located at Northwest part of Ethiopia.The names of the farms are not included to secure anonymity rather considered as farm 1, farm 2 and farm 3. Random sampling techniques were used to select the respondents among these farms. The target populations of the study area were the whole number of flower farmworkers (1542) in the selected flower farms. Based on Kothari formula, the 307 flower farm workers were determined for interview. Secondary documents were also referred. Both qualitative and quantitative data analysis techniques were used. Besides, textual analysis was also used to supplement the questionnaire survey. The data generated

through questionnaire was coded, edited and entered into SPSS 20 for further statistical analysis. This study employed both descriptive and inferential statistics for presentation and analysis. Descriptive statistics such as mean, standard deviation, frequency, tables and percentages to compare and contrast different categories of sample units with respect were also used to the desired characters of the respondents. Inferential statistics was employed to test hypothesis and draw the conclusion and predict based on the result. Besides, the binary logistic regression model was used to identify determinant variables affecting negatively and/or positively to the outcome variable i.e., the socioeconomic rights of flower farmworkers. It was very useful tools that enable to assess the relationship between the regressed and explanatory variables and determine their significance. Therefore, the accuracy and relevance of any policy implication or generally research results mainly depend on the proper specification of the model.

RESULTS AND DISCUSSIONS

This section discusses the main findings based on empirical data from the field to identify factors of the socioeconomic rights of farmworkers in the cut flower industry of Ethiopia.

Demographic characteristics of respondents

The respondents were characterized in different categories in terms of gender, age, educational status, marital status among others. Thus, from a total of 307 farmworkers, the majority of the respondents (71.3%) were women and the remaining 28.7% were men. Regarding marital status, most (80.5%) of them are single and hence do not have children and are willing to work long hours under variable working conditions and 14.3 % of the farmworkers are married while the remaining 5.20% of the farmworkers are divorced. Hence, the chi-square result showed that there was statistically significant relationship between marital status and socioeconomic rights of farmworkers at $P< 0.05$. As the majority of respondents' showed as their wages are not adequate to meet their basic needs: thus, most of them are choosing single lived either with their parents or with their siblings who also worked in flower farms or other sector in order to share their living expenses.

Regarding education level, the majority (34.9%) of the respondents indicated that they have had primary (grade 1-6) education level, 22.5% had secondary education level (grade 9 and 10) and the remaining 13.7% had junior (grade7-8), 11.7% (college diploma), 10.7% (unable to read and write/illiterate), 3.9% (certificate level) and 2.6 attended first degree. The age composition of farmworkers in both farms ranged between 17 to 46 years. This indicates that the workforce in all farms were young, with a mean age of 24.17. Age has important implications in flower production. Because the flower industry requires active and energetic workers who can perform such heavy tasks as packing, picking and carrying flowers in the green house, for which only young workers can meet that challenge. In this regard Taylor (2010) asserted that flower farms in Ethiopia opened up a labor opportunity for unemployed and under employed rural youth. Also the mean family size of the respondents was 3.21 with a standard deviation of 2.32, which is much lower than the regional and national averages of 5.16 and 4.6, respectively reported by Ethiopian Central Statistical Authority (CSA), 2016).

Socioeconomic conditions of farmworkers

This section include employment conditions, source of information during job seeking, employment status and agreement, length of service, working days and hours, feeling with total working hours. Employment opportunity encompasses not only the existence of access to employment but also the ability of the work to provide an adequate income for living, employment status and agreements available to employees, which would be the main catalyst for sustainable development. Therefore, source of information during job seeking, employment status and agreement of flower farm employees are examined under this section.

Source of information during job seeking

As seen from Table 1, farm workers were asked how they got information when they first applied for employment and got the job. The majority (61.90 %) farmworkers indicated that they heard about it through friends and relatives who were the main primary source of information for potential flower farm workers. This implies that informal contacts are useful in accessing information about employment in the flower farm industry. Of those, 30.9 % of farmworkers would be gotten information at work sites and 6.5% of respondents got information on the vacancy board and the remaining 0.6% of respondents got information from work agencies or brokers.

Table 1: Source of information for getting this job

Source of information	**Name of flower farms**			**N**	**%**
	Farm 1	**Farm 2**	**Farm 3**		
From vacancy board	1	3	16	20	6.50
Heard through friends & relatives,	37	46	107	190	61.90
checking at websites,	31	31	33	95	30.90
Through agencies/broker,	0	0	1	1	.30
Other	0	0	1	1	.30
Total	**69**	**80**	**158**	**307**	**100.0**

Source: Field survey, 2019

Employment status and agreement of employment conditions

As one can see from the Table 2 (below) most of the workers are permanent worker (87.6%) and the remaining 12.1% are temporary workers. Only few (0.3%) are daily laborers. This result shows that most workers do have job security that is sustainable since they cannot be told to stop work and go home any time if the manager is not happy with their work performance of the majority of workers in the surveyed flower farms.

Regarding whether farmworkers have signed job contracts or not, the majority (95.1%) of them signed contracts (agreement). This implies that the majority of farmworkers worked as permanent employees. Hence, this provided them with sense of job security and addressed their major concern of securing work throughout the year/provides them with legal basis to deal with employers when their rights are not respected. This is the significant impact after the introduction of EHPEA code of conduct that is putting upward pressure flexible labor arrangements and eventually contributing to raise flower workers labor

condition (EHPEA, 2016). However, knowledge of the details of their contract varied from one to the other. It was apparent that some of the farmworkers did not know and had never read their contract terms. This might be associated with the low level of educational background among workers on the flower farms.

Table 2: Situation of employment at flower farms

Employment status	**Gender of farmworkers**		**N**	**%**
	Female	**Male**		
Temporary worker	33	4	37	12.10
Permanent worker	185	84	269	87.60
Daily laborer	1	0	1	.30
Total	219	88	307	100.00
Do you have employment agreements?				
• Yes	205	87	292	95.10
• No	14	1	15	4.90
• Total	219	88	307	100.00

Source: Field survey, 2019

Length of services/work experience, working days and hours

As one can see from Table 3 (below) farm workers who participated in this study had work experience mean of 31.91 months and standard deviation 18.18. This study shows that most of the farm workers had long year experience. In addition, the majority of the farm workers indicated that they are working 6 days per week and 8 hours per a day. Such working hours is similar to in breach of the International Code of Conduct for the flower farm workers which stipulates the normal working hours per week to be 48 hours. Although, most of them are supposed to get day off on Sundays, it is not the case in the flower farms in Ethiopia. Also the Ethiopian Labor Law Article 69 (1) states that a worker shall be entitled to a weekly rest period consisting of not less than twenty-four non- interrupted hours in the course of each period of six days. It is also indicated in Article 61(1) that normal hours of work shall not exceed eight hours a day or forty-eight hours a week.

Table 3: Situation of farmworkers in terms of working hours, days and months

Items	**Descriptive statistics**					
	N	**Range**	**Min**	**Max**	**Mean**	**Std. Dev**
How many months did you work in this farm?	307	71	1	72	31.91	18.181
How many days do you work per week?	307	0	6	6	6.00	.000
How many hours do you work per day?	307	0	8	8	8.00	.000

Source: Field survey, 2019

Opinion of farm workers in terms of working hours

This study shows that from the three surveyed flower farms, most of the workers are below satisfactory (72.3%) and satisfactory (25.4 %). Only few (2%) are good satisfactory, the remaining (0.3%) are very satisfactory. This shows that most

workers are not happy about the total hours work and the remuneration they get from the farm since the working hours is normal but low wage per month.

Division of labor

Jobs in flower farms were categorized into nine major groups. These were greenhouse, packing, protection (sprayers and irrigation), scouting, cleaner, supervisor, assistance supervisor, flower transportation and others. Thus as can be seen from Table 4(see below) from the total respondents the majority of female respondents who predominantly worked in green houses (involving planting seeds, growing and taking care of flowers) and cleaner sections, claimed that, such work standards were tiresome and keep them under pressure demanding excessive level of effort, becomes very difficult especially during hot season. This idea is directly supported by studies conducted by Workneh (2007), which shows that workers sometimes experience health and safety problems due to long hours of standing in the greenhouse causing their feet to swell and also causing kidneys problems. As the majority of greenhouse flower workers responded, it was difficult to get transferred to other sections on the basis of their work conditions. On the other hand, packing, spray of agrichemicals and Irrigation (mixing of fertilizers, other necessary ingredients for flowers growing and monitoring the water lines) was performed only by males while the remaining activities like scouting, flower transportation and supervision activities would be done by both males and females together.

Table 4: Division of labor in the flower farms

Workers department	Sex		N	%
	Female	Male		
Packing	0	17	17	5.50
Greenhouse	105	11	116	37.80
Spray	0	19	19	6.20
Scouting	6	2	8	2.60
Cleaner	55	0	55	17.90
Irrigation	0	19	19	6.20
Supervisor	1	9	10	3.30
Assistance supervisor	14	0	14	4.60
Flower transportation	11	4	15	4.90
Other	27	7	34	11.10
Total	**219**	**88**	**307**	**100.00**

Source: Field survey, 2019

Wages and related benefits

(i) Wage, salary increment and amount of increment

From the Table 5 the mean salary of the respondents is 1205 birr (or $ 32.70) per month. It is evident that the amount of wages flower farm workers receive is very low compared to the number of hours they work per week, the amount of effort

and the difficult nature of the work they do (e.g. spray and packing flowers requires workers to stand the whole day). The unfairness of the payment that do not improve their welfare can be also explained in terms of the profits some of these flower farms make while underpaying their workers. Most of the respondents from same flower farm reported that they are the ones who receive lower wages which is not sustainable for their living expenses. In addition to, most of the key informants indicated that the income they get is not sufficient to meet the minimum basic needs. Most workers are dissatisfied with their payment. This is supported by studies (Nigatu 2010; Weldeghebrael, 2010), a similar or even lower monthly wage was paid to flower workers in Ethiopia that did not amount to a living wage. Additionally this finding is supported by theories studied by Katz (1987) and Levine (1993) higher wage may increase worker effort due to the greater cost of job loss, so workers would want to reduce the chances of being dismissed for low effort.

This study revealed that the wages and length of working hours are not equivalent or proportional and they found it difficult to provide for the basic necessities such as food, housing, healthcare, clothing and transport. Frequently, workers were faced with constraints of money for emergencies such as medical expenses. Generally, all farmworkers mentioned repeatedly that wages obtained from the flower farm found them hardly enough income for the whole month. Looking from another angle, since most of these flower farms bring to the owners in hundreds and thousands of dollars the workers deserve at least minimum living wage to be able to survive and be productive. Especially in countries like Ethiopia where the National currency is devalued from time to time, the dollars flower farms owners get from flower exports tend to increase in value while workers' wages remain unchanged.

Also as seen from the Table 5 the majority of the farm workers (88.9 %) receive salary increment while 11.1% respondents did not receive salary increment. Based on this, the mean amount of the salary increment workers got at once (percentage) in the three farm was 19.2% and the standard deviation is 11.5%. Even if have salary increment, the amount of salary was very low and the percentage of salary increment were also low, i.e., the farm workers salary not enough to cover the expense. In some cases, women workers are paid less than men in some farms. This is because women are assigned for low paying activities such as working in the greenhouse rather than being a supervisor at a higher level or a manager that pays more.

Table 5: Wage, salary increment and amount of increment

Items	**Response**	**Name of flower farms**			**N**	**%**
		Farm 1	**Farm 2**	**Farm 3**		
Have you got salary increments since you have been employed?	Yes	58	77	138	273	88.9
	No	11	3	20	34	11.1
	Total	69	80	158	307	100.0

Descriptive statistics						
	N	**Range**	**Min**	**Max**	**Mean**	**Std. Dev**
Wages	307	4500	800	5300	1205.16	552.505
What was the highest amount of salary increment you got at once (%)?	274	48	2	50	19.20	11.479

Source: Field survey, 2019

(ii). Provident/pension fund

Another important component related to workers' wages was whether workers have provident/pension fund or not. The majority (92.5) of the workers get the pension cover by the firm while others not get pension fund. Total pension per month in each worker is 17% .The mean amount of the pension fund covered by the farm is 10.48% remaining 6.52% covered by the workers.

(iii). Salary (income) good enough to cover living expenses

The majority (85.7%) of the farmworkers responded that their monthly income is not good enough to cover living expenses. By the same token one of the key informant stated that majority of flower workers adopted various strategies to supplement monthly wages such as small scale farming (rearing sheep and chicken) and also informal business such as petty trade, selling food and others. This is directly related to studies by (Tanya & Olga 2007; Leipold & Morgante 2013; Hale & Opondo 2005) which showed that the wages in flower farms did not amount to a living wage for the majority of workers and their families. Among the sampled flower farms, farm 2 most of the respondents reported that they got bonus either in cash or in kind. However, all farmworkers in farm 3 have not got any bonus either in cash or in kind.

Health and safety issues

Occupational health and safety in flower farms reoccurs in academic writings and UN agencies reports such as the ILO because they are labeled among those at a high risk of occupational health problems due to their high level exposure to agrochemicals (Marcela et al., 2012; Dolan et al., 2003). Ethiopia has committed itself to respect and protect worker's rights for a healthy and safe working environment by ratifying the Convention on occupational health and safety (No.155) (Nigatu, 2010, Getu, 2009). Thus, this section presents any orientation/training with regard to health, on safety rules and guidelines before starting work, regular checkup and monitoring of workers health and safety situations and workers follow safety instructions and proper re-entry intervals with regard to pesticide application.

(i) Training with regard to health and safety

It is true that training and orientation were recognized by most firms as crucial for increases in productivity and efficiency as well as in improving quality. These not only allow employees to make more income and do less repetitive work, but also enhance work productivity and efficiency on the farm. However, the majority of the farmworkers (62.2%) have not get any orientation/training with regard to health, safety rules and guidelines before starting the works and only 37.8% said that they got orientation/training with regard to health, safety rules and guidelines before starting their work.

Additionally, workers level of literacy and sometimes carelessness to apply health and safety procedures by some workers were also another challenge. Despite of this the majority (72%) of the respondents did not fully understand the health and safety instructions. Workers who are working in such a risky environment, without general safety knowledge, might have serious health problems. When asked about their health situation since employment, several workers (83%) reported job-related health problems mainly those who have close contact with hazardous chemicals. These were different types of sicknesses such as headaches, coughing, respiratory illness, and skin rashes. Similar studies on health and safety from Ethiopia and other countries showed flower farm workers low level of awareness on safe pesticide handling practices and compliance to safety procedures (Marcela et al. 2012; Hanssen, et, al. 2014; Belay et al. 2017). This pattern was attributed to lack of training on health and safety as well as absence of regular follow up and monitoring system. In relation to occupational health and safety of the Ethiopian Horticulture Producer Exporter Association (EHPEA) code practice and the labor law of Ethiopia state that workers shall be properly instructed and notified of the hazards pertaining to their respective occupations (Ute, 2013; Nigatu, 2010, EHPEA, 2015).

(ii) Regular medical checkup and monitoring of workers health and safety situations

The majority of the respondents (94.50%) did not get regular checkup unless and otherwise one gets sick he/she would be referred to hospital in cases of severe problems. Thus in the three farms all most all, there was no mechanism put in place to ensure that flower workers were fit for the job and to further establish a baseline data about their health conditions. These results indicate that there is a gap in awareness creating and a lack of enthusiasm in application of the occupational health and safety guidelines in general. This study also revealed the incidents and symptoms among the farmworkers. All workers reported incidents of pesticide-related health symptoms including eye irritation, permanent sight reduction, skin irritation, headache, and abdominal pain after routine pesticides application.

(iii) Follow-up safety instructions and proper re-entry intervals

The flower industry is heavily dependent on chemical pesticides. Farmworkers were asked whether their respective farms follow proper safety procedures in the use and handling of chemicals and pesticides. About 41% of the respondents indicated that sometimes they follow safety instructions, 33.9% said that they never practice safety instructions while 24.1% said rarely follow safety instructions. This implies that even if after the pesticide application re-entry was not allowed for around three to four hours (depending on the toxicity of the chemical sprayed). The majority of greenhouse and packaging section respondents from the three farms appeared to have not practiced safety instructions. This leads workers exposure to various health effects as Hanssen et al., (2014) noted similar trend of occupation health and safety practices given the level of flower workers daily exposure to agro-chemicals that might cause adverse health effects among flower workers reported.

(iv) Availability of working facilities

As we can observe from Table 6, the entire surveyed flower farms are found to be less suitable for the workers in terms of providing necessary facilities for their workers. Thus, the majority of the farmworkers said that they have not got pure drinking water available (65.1%), showers (58.6%) and washing facilities (60%). In addition all farmworkers revealed that there is no housing, first aid facilities and clinic for emergency health problems which contradicts with the EHPEA code of practices. All farmworkers revealed that they used underground water for drinking and as such might not be safe for drinking. One can imagine that to what extent workers suffered with absence of clean drinking water in conditions where the temperature in the greenhouse was very hot. Workers have to buy soft drinks, which are expensive and may not be also always available on the farm sites as it is located far away from town.

Lack of sanitation facilities such as shower is particularly worth noting in view of the fact that the workers had to work for 8 or more hours in an environment with temperature in the greenhouse. Provision of cleaning supplies like soap would be very crucial especially for those workers who often get in contact with pesticides and chemicals. Unfortunately, most of the flower farms surveyed have not been able to make this supply available for the workers. Most of the toilets have also dry pit structures, which do not seem to be maintained regularly.

Related to annual leave and holiday package, one out of the three farms, 58**%** of farmworkers said that the company has not given their annual leave and holiday package leaves. This is supported by similar ideas by ILO (2006) reported in Ethiopia, there is a gap in fulfilling the minimum labor conditions in the floriculture farms which includes, unlawful contractual agreements, absence of weekly rest day, failure to implement annual leave, work conditions on public holidays and absence of the right payment, and others.

Table 6: Availability of work facilities among the cut flower farms

Facilities	Responses	Name of flower farms			Total	%
		Farm 1	Farm 2	Farm 3		
Toilet	Yes	25	43	129	197	64.2
	No	44	37	29	110	35.80
Drinking pure water	Yes	2	0	105	107	34.9
	No	67	80	53	200	65.1
Availability of showers	Yes	9	29	89	127	41.4
	No	60	51	69	180	58.6
Free medical care	Yes	69	80	158	307	77.5
	No	0	0	0	0	22.5
Housing	Yes	0	0	0	0	0
	No	69	80	158	307	100
Protective clothes	Yes	1	70	129	200	65.1
	No	68	10	29	107	34.9
First aid facilities	Yes	0	0	0	0	0
	No	69	80	158	307	100
Clinic for emergency	Yes	0	0	0	0	0
	No	69	80	158	307	100
Annual leave and holiday package	Yes	29	80	158	267	87
	No	40	0	0	40	13
Washing facilities	Yes	5	0	120	125	40
	No	63	80	38	181	60
Sick leave	Yes	69	80	158	307	100
	No	0	0	0	0	0

Source: Filed survey, 2019

Means of transportation from home to farm and vice versa

From the three surveyed flower farms, the highest number of farm or on average 48.9% of the workers got home to farm on foot. The other respondents (30.60%) use the public transportation provided for by the farm and 20.50% of the workers uses public transport. From this output, the mean transportation does it takes one to reach at those farm areas from home by those transportation services is 32.65 minutes require with a std. deviation 18.13. This implies that workers are affected by the transportation means. Hence, it is evident that in the two flower farms have free transportation and one flower farm does not have free transportation service provided for the workers. This is because most of the farms are located far away from where majority workers live in Bahir Dar and for them to be able to start work on time they absolutely need free transportation. It would be difficult for the workers to be able to go to work on time in the absence of free transportation service.

Table 7: Workers rights related with access to means of transportation

Means of transportation	Name of flower farms				Total	Percent (%)
	Farm 1	Farm 2		Farm 3		
On foot	11	52		87	150	48.90
By bus provided by the farm	0	27		67	94	30.60
By public transport	58	1		4	63	20.50
Total	69	80		158	307	100.0
Descriptive statistics						
	N	**Range**	**Min**	**Max**	**Mean**	**Std. De**
How long does it take to reach at this farm area from home?	307	115	5	120	32.65	18.133

Source: Field survey, 2019

Awareness and membership of workers association (workers right)

The survey showed that 89.3% of farmworkers have no information about the Ethiopian labor codes while the remaining 10.7% have information. However, even if have information about Ethiopian labor codes, they did not have prior opportunity to get training about the labor law efficiently. As they mentioned, they have learned about their basic rights and duties from colleagues and supervisors informally. Yet, their basic knowledge related to the warning and firing procedures is by observing when others get fired. This resonates with findings from other countries that codes of practice are most often unknown, unavailable or not translated at production sites (Leipold & Morgante, 2013; Rissgaard, 2009).

Regarding workers association the majority (65.9%) of the respondents were not member of workers' association while the remaining 34.1% of respondents were member of workers' association. They were also asked the usefulness of the association and 61.2% of respondents said that workers' association is helpful in serving its members to solve problems with the management while the remaining (38.8%) respondents' said that workers association is not helpful to solve problems with the management. However, respondents also complained that even if work association is available the power of workers association is weak. In this regard Rikken (2010) and Leipold & Morgante (2013) found that private social standards have played a role in rising labor conditions in flower farms even though limited to go beyond this and cover issues of right that could potentially empower workers and their trade unions. Regarding handling management problems, the majority (86.6%) farmworkers deal their issues with through supervisors, (10.1%) deal their issues through colleagues and the remaining (3.3%) respondents deal their issues through the union. Generally these workers' unions function very differently; while some are virtually non-existent, a few others strive actively to change working conditions.

Table 8: Situation of farmworkers in terms of freedom of association

Items	Response	Name of flower farms			Total	Percent (%)
		Farm 1	Farm 2	Farm 3		
Have you heard about the Ethiopian labor codes?	Yes	4	3	26	33	10.7
	No	65	77	132	274	89.3
	Total	69	80	158	307	100.0
Do you have a workers' association in your farm?	Yes	60	74	158	292	95.10
	No	9	6	0	15	4.10
	Total	69	80	158	307	100.0
If yes, are you a member of that association?	Yes	48	28	40	116	37.80
	No	21	52	118	191	62.20
	Total	69	80	158	307	100.0
Do you think the association is helpful in helping its members to solve problems with the management?	Yes	55	48	85	188	61.2
	No	14	32	73	119	38.8
	Total	69	80	158	307	100.0
When you have issues to be discussed with the management, how do you go about dealing with such issues?	Through the union	7	1	2	10	3.3
	Through colleague	12	0	19	31	10.1
	Through supervisors	46	59	132	237	86.6
	Total	**65**	**60**	**153**	**278**	**100.0**

Source: Field survey, 2019

Factors determining socioeconomic implication of cut flower production on farm workers

Binary logistic regression was employed to identify determinant factors to the dependent variable in socioeconomic implication and rights of farm workers of cut flower in North West Ethiopia i.e., the predictor variables such as, age, educational level, workers department, wage, employment status, workers bonus, workers as member of associations and workers get training before starting the works. The pseudo R^2 showed that all predictor variables entered into the model have explained 39.68% of the total variation of the dependent variable and it implies that predictor variables have the power to explain the dependent variable. The p-value (0.000) showed that there is an improvement of the model after the predictor variable has entered to the model i.e., all independent variables together were determinant variables and it was significant at $p<0.01$ and at $p<0.05$.

Before interpretation and discussion of the result, post estimation of multicollinearity test was run to check correlation among continuous independent variables or not. As a rule of thumb, if VIF>10 there is multicollinearity otherwise there was no multicollinearity. The variance inflation factor test result was 1.34 which was much lower than 10, indicated that there was no multicollinearity among independent variables. Thus there was no multicollinearity problem.

Table 9: Binary logistic regression results with odds ratio

Variables	**odds ratio**	**Std. Err.**	**Z**	**P>|z|**
Age	.5377285	.0734978	-4.54	0.000 ***
Wage	1.00275	.0007825	3.52	0.000 ***
Educational level				
Primary (1-6)	.269476	.1919483	-1.84	0.066 *
Junior (7-8)	.2766523	.2391639	-1.49	0.137
Secondary (9-12)	.2289987	.1784958	1.89	0.059*
Certificate level	.2269538	.259715	-1.30	0.195
Diploma level	.1077499	.1099281	-2.18	0.029**
Degree and above	0			
Workers department				
Greenhouse	.9036865	.733523	-0.12	0.901
Spray	.2057547	.2352342	-1.38	0.167
Scouting	1 (empty)			
Cleaner	.3246409	.2845631	1.28	0.199
Irrigation	.006534	.0114602	-2.87	0.004**
Supervisor	.0206498	.0433701	-1.85	0.065**
Assistance supervisor	2.283928	2.836403	0.67	0.506
Flower transportation	.7369677	.832399	-0.27	0.787
Other	.7340864	.7159719	-0.32	0.751
Employment status				
Permanent	8.415303	6.011141	2.98	0.003**
Daily laborer	0 (empty)			
Workers get some bonus				
No	18.96469	11.37999	-4.90	0.000***
Training before starting job				
No	4.11712	.0226331	-5.80	0.000***
Member of associations				
No	3.977216	1.952856	-2.81	0.005**
Constant	9240.649	24528.77	3.44	0.001
Logistic regression			Number of obs = 258	
LR chi2(13) = 120.99				
Prob > chi2 = 0.0000				
Log likelihood = -93.200766			Pseudo R2 = 0.3936	

Note: *=10%, ** = 5% and *** =1% significant level
Source: Own estimation, 2019

The table shows that fifty five variables were entered to the model. Among these, eight variables such as age, educational level, workers department, wage, employment status, workers get some bonus , workers are member of associations and workers get training before starting job were statistically significant at P<0.05 in affecting socioeconomic rights of farm workers in cut flower industry.

(i) **Age:** The result showed that age is a negative significant determinant factor of socioeconomic implication of workers which is significant at 5% level. The result implies that when age increases by one year the socio economic implication of cut flower farm workers decrease by 0.72 times. This implies that the younger workers were more affected by the cut flower farms;

(ii) **Wage: T**he result showed that wage is a positive significant determinant factor of socioeconomic implication which is significant at 5% level. The result indicated that when wage increases the likelihood of socioeconomic implication of workers also increase i.e., when salary increases by one unit the odds of socioeconomic

implication of workers also increases by 1 times. The farm owners paid enough salary to the farm workers that is positive to socioeconomic implication on cut flower farm workers;

(iii) **Educational level:** The result showed that the primary (1-6) educational level is negative significant determinant factor of socioeconomic implication of workers which is significant at 10% level. The odd ratio of Primary (1-6) educational level is 0.27 lower compared to the illiterate (unable to read and write). The secondary (9-12) educational level is negative significant determinant factor of socioeconomic implication of workers which is significant at 10% level. The odd ratio of the Secondary (9-12) educational level is 0.23 lower compared to the Unable to read and write/illiterate. Educational level diploma is negative significant determinant factor of socioeconomic implication of workers which is significant at 5% level. The odd ratio of educational level diploma is 0.11 lower compared to the Unable to read and write/illiterate. The result implies that the Unable to read and write/illiterate farm workers are more affected than the literate workers;

(iv) **Workers department:** Division of labors is significant determinant factor of socioeconomic implication of workers which is significant at 5% level. The result showed that workers department/labor division in irrigation is a negative significant determinant factor of socioeconomic implication on the farm workers which is significant at 5% significant level. The result showed that, the magnitude of influence is, the odd ratio of workers department for irrigation is 0.006534 units lower compared to the workers department for packing (reference level) and the odd ratio of workers department for supervisor is 0.206 units lower compared to workers department for packing;

(v) **Employment status:** It is positive and significant determinant factor of socioeconomic rights of workers which is significant at 5% level. The result also showed that on average the permanent workers have the socioeconomic implication of 8.41 units higher than those temporary workers. This shows that most workers do have job security since they cannot be told to stop work and go home any time if the manager is not happy with their work performance implying sustainable job environment;

(vi) **Workers get some bonus:** It is also found as significant determinant factor of socioeconomic rights of workers which is significant at 1% level. The result showed that on average the workers not get some bonus have negative implication on socioeconomic rights of 18.9646 units higher than those workers who get some bonus that would be sustainable;

(vii) **Training before starting the works:** Workers get training before starting the works is significant determinant factor of socioeconomic implication of workers which is significant at 1% level. The result showed that on the odd ratios, the workers who do not get training before starting the job have negative socioeconomic implication of 4.11712 units higher than those workers who get training before starting the works. This implies that workers who do not get training before starting the works have more negative socioeconomic implication of farm workers than workers who get training before starting the works;

(viii) **Member of associations:** It is also found as determinant factor of socioeconomic rights of workers which is significant at 5% level. The result showed that on average the nonmembers of workers association have negative socioeconomic implication of 3.97 units higher than those being members of workers association. This implies that non-member of the association workers have more socio-economic implication being affected by

the flower farm owners/managers. The association is helpful in helping its members solve problems with the management.

Is private social certification a viable option for respecting workers' rights and sustainable flower production?

In sum, besides the aforementioned variables, other social issues like grievance, harassment, safety concerns about travelling home at night, sick leave, inappropriate punishment, dismissal, deductions from pay, delaying in salary payment and related problems are repeatedly mentioned in many flower farms. The *results are quite similar* to studies on flower producing countries (Costa Rica, Columbia, Ecuador, Kenya and Uganda). For example, a study on flower workers in Costa Rica and Columbia found out that majority of flower workers surveyed showed poisoning symptoms, including headaches, dizziness, hand-trembling and blurred vision (Belay, 2018). Belay (2018) stated that women working in the flower industry reported significantly fewer live births. A study by the International Labour Rights Fund (ILRF) 2008, found that more than 66 per cent of Ecuadorian flower workers were plagued by work-related health problems, including skin rashes, respiratory and eye problems. In Uganda and Kenya, as a result of poor working conditions and poor pay, workers had at different times staged strikes as a way of putting management on pressure to improve on their working conditions and salaries. For example, according to Fortune, (October 08, 2017) about 4,000 workers at Sher flower farm went on a strike for delayed salary payment. The strikers threw stones at the windows of the company and damaged them.

Given weak state capacity and lenient environmental and social regulation in many developing countries ethical trade is an important alternative for remedying some of the negative impacts of global supply chains in the South. In all at least 20 different certification and labeling schemes social and environmental and/or standards launched world-wide in cut flower export (Riisgaard,2011, BTC,2010) such as Fair trade, Ethical Trade Initiative, MPS-ABC, MPS-SQ , Fair Flower Fair Pant, EHPEA code of practice among others. At the moment, in Ethiopia some farms have most of these and some have none. The majority have at least one certification. The question arises whether certification can improve the sustainability of the production of flowers, and to what extent it becomes a barrier in trade. This paper reviews different schemes with respect to their impact on trade and their effectiveness and ability to improve environmental and social conditions. Studies by Humphrey (2008) in Kenyan horticulture and Belay et al.(2017) in the flower industry of Ethiopia presented support to the notion that the adoption of emerging certification on standards can play a positive role by serving as a catalyst for promoting a positive image and act as reputation insurance against negative events. Certification of growers to social standards is often a requirement from buyers and since different buyers demand different standards, it is usual for growers to hold multiple certifications. Most farms that have achieved two or more certifications, they have a better and professional outlook from the outside than the farm that has not. Because it is hard to see how certifications make a visible difference in ground or reality in terms of safety for the workers' health. Private certification on standards may not always deliver what they promise to consumers.

CONCLUSIONS

The Ethiopian flower industry is one of the largest in Africa, but has been criticized for poor labour and social standards and its implementation, in particular violation of many socioeconomic rights of farm workers. This paper investigates these claims using primary and secondary data. Production of cut flowers has grown to a major business in many African countries. This sector has been identified as one of the industries with an opportunity to grow and contribute positively to the agricultural transformation and economy of Ethiopia. The rapid expansion of the Ethiopian cut flower industry has made a profound impact on income and the lives of hundreds of thousands of people. Although it is a newly emerged sector in Ethiopia, it achieved a remarkable development and pushed the country to become second exporter of flower in Africa next to Kenya. It is likely to be doubled for the next few years. The government plays a vital role for this development through promoting favorable investment conditions to FDI. Besides, labour and land availability, agro climatic advantage and geographical proximity to the European market are additional triggering factors which contribute for booming of the sector. Overall, investment on cut flowers makes a considerable contribution towards economic growth and development in Ethiopia and that the country should seek to further its expansion.

To come back to the initial question of this paper, it can be concluded that achieving a balance between economic and social sustainability is one of the greatest challenges to operationalizing the concept of workers health, safety and rights in the production of Ethiopian flower industry. The three pillar concept of sustainable development (plant, people and profit) has proved to be a useful analytical tool for exploring the prospects and challenges of Ethiopian floriculture industry in the context of socioeconomic rights. This finding tends to contradict 'the aspirations, goals and priority areas of Agenda 2063' of Africa for Inclusive Growth and Sustainable Development and the 2030 Agenda for Sustainable Development of the United Nations. The social aspects of intense flower cultivation are often neglected. The flower industry uses toxic chemicals. Some of them have potential to cause serious harm to human health (sprayers, harvesters and other workers in the greenhouse). The health risks associated with a particular pesticide are a function of the degree of (un) safe selection and use. The full extent of the health impact of pesticides in developing countries is impossible to calculate because of the lack of data, medical centres, and monitoring. Action in response to threats of chemical pesticide use on human health and environmental damage should not be delayed because of the lack of full scientific certainty. Moreover, sustainability initiatives have proliferated in cut flower industry in recent years to address social and human rights issues.

Protecting workers' health and safety are essential to ensure sustainability of the flower industry. Thus it needs to transform from the existing (conventional) unsafe production system to safe and sustainable. Unless, floriculture industry might, to a significant degree and become a threat to the human health unless the activities of the industry are well managed, supervised and subjected to an effective regulatory system. Finally, a vibrant, sustainable and resilient agriculture sector is vital for Africa's economic future. Indeed, agriculture remains central to Africa's economies. The future of Africa's agriculture is influenced by a host of new drivers including changing demographics and perceptions of agriculture, climate change, growing fear of global food insecurity, and technology innovations. A number of responses have already emerged as a result, indicating new directions: a concerted effort towards green revolution; Africa as a potential solution to future global food crises; increasing interest in African agriculture from the emerging global South; a search for new farming models; and an emerging agro processing industry. These developments are likely to transform African agriculture and indeed Africa itself

though this transformation will depend on the policy environment that arises in response to these new drivers (Kariuki, 2011; AfDB, 2017).

Finally, those who deal with the control of pesticide poisoning and other occupational and environmental hazards need to adopt models of causation that recognize the critical role of power relations underlying these health problems. This understanding should manifest in greater emphasis on empowerment of, and agency by, farm workers in our public health programs, policies, and research dealing with occupational hazards in agriculture. At a policy level, it is also critical that development choices (e.g. pesticide-based agriculture versus integrated pest management) be based on an explicit exposition of the full costs of a particular technology (e.g., pesticide use) so as to avoid the externalization of costs that presently occurs, and that serves to undervalue burdens accrued to the most marginal sectors of society.

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