

## Q&A Session: The Fruits and Vegetable Value Chain in Ethiopia: Transformation, Prices, and Implications for Consumption and Nutrition

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Question	Answer
What was the possible reason why productivity of fruit was decreasing in your analysis?	Thank you for the question. One of the reasons could be the change in the manner the land use data was collected by CSCA particularly for permanent crops. But we need to thoroughly investigate further to determine if that is the reason. Otherwise, we see the types of fruits sold in the markets did not show that their yields should have gone down. This is one of the caveats mentioned in the study.
Which months of the year is the prices high and when are they cheaper? Is the increase in price because of the Orthodox fasting or because of less supply?	Vegetable prices are more seasonal than fruits and are higher in the first half of the year. This is also the same time as the Orthodox fasting period which is February to March (sometimes April). We need to investigate if this is because of lower supply or increased demand. When Bart and I started the study there was no studies on fruit and vegetable prices and we tried to cover everything in this study. However, the most important thing is to stimulate discussion on prices, commercialization, etc. There are so many questions to be answered and which require further investigation, and this question is among those.
What the rationale behind December was selected for price analysis?	The December 2011 prices. The CSA has been producing the prices indexes that take December 2011 as the base year. This based month has now changed to December 2016. However, for comparability with our research we have used the December 2011 prices.
What about the availability and accessibility of post-harvest handling technologies at smallholder farmers level that may have an effect on prices of vegetable and fruits, their perishable nature?	On the post-harvest handling techniques, we just don't have the data. We were using CSA data which has a large coverage (temporally and geographically), but smaller in terms of the content of the data produced in each year. They are intending to include post-harvest handling techniques in the surveys, but until now they do not have these. This question could be addressed in subsequent research because we also have other large scale household datasets.
Do you have the disaggregated data for each commodity? I am wondering if we have outliers in terms of productivity trends.	Yes, we do have data on each of the commodities in the paper, but not on the production aspect. We do have data and could have investigated the trends in yields of specific commodities and I take that as one caveat.
The area coverage of vegetable production increased from 2005-2018, the yield remained almost	Yes, the output and area increased almost in the same proportion. In the slide, there are years where the output increased faster than the area in which case the change in yield was positive (grew). But looking at

constant, but the output increased. Can you explain the reason for this?	the overall period, yields did not change because area and output grew at the same proportion. Since yield is a ratio of output and area, we do not have much change in yields.
<b>Dr Bart Minten, Senior Research Fellow in IFPRI's Development Strategy and Governance Division</b>	
Question	Answer
Could you please explain where is the transformation part? I see price and production habits but not transformation.	Transformation is the take of data of that cluster. There was little vegetable production happening in that area. Forty to fifty years ago, there were only pastoralists living here. The transformation part is that there was initially no production in that area, but it became the major vegetable production area worth \$200M per year.
The analysis of vegetable production for both farmers (small scale and medium scale) is focused only on output and economic value. What about their contribution for nutrition value? How can we encourage or incentivize those farmers to consider the nutrition value when producing nutritionally dense variety of vegetables?	We were looking at what is happening with the green vegetables and the changes happening there. Ethiopian kale were grown but was not so important in that area compared to onions and tomatoes. They have nutritional value, but we would like to see more types of vegetables eaten. So, more has to be done to diversify the types of vegetables grown in that area.
How has the covid19 pandemic affected the transformation of the vegetable sector that you described?	Since we have done this survey in the beginning of last year, we have followed up with a number of telephone surveys to see what is happening. At the beginning (and this continues) we have seen a big increase in the labor costs. People were afraid of going to those areas, of taking buses, less migrants were coming to these areas. This pushed up the labor costs in a big way which has been a big issue for the profitability in vegetable cultivation. The second thing that we have seen happening is we saw huge volatility in output prices. We have seen huge swings in the prices of onions and tomatoes which have gone up in a big way, while green pepper has decreased which were driven by trade restrictions between regions. These were all driven by trade restrictions between regions. There was an issue of onions normally imported from Sudan not coming in anymore and increased the prices in Addis. The volatility was a big issue. We also saw the marketing costs changing a little bit, but this was not driving the price differences. It was more the restrictions on mobility and trade which drove up the prices.
Is there food safety differences between the smallholder farmers and medium-scale tenants?	We do not know, and unfortunately, we could not test that. It certainly would have been interesting to look at. What we do know is that the bigger guys are producing the higher quality vegetables; the vegetables that are getting a bigger premium in the market in Addis. But that is not an indicator for food

	<p>safety. What we understood from talks with people is that often the bigger producers rely more on expensive and less dangerous agro-chemicals whereas the smallholders go for the cheaper ones that could be more dangerous. However, this is qualitative information, and we have no data on that. It would be interesting to study this question further if there is an opportunity.</p>
<p>What is the gender balance in this gig economy? Are women more likely to be low paid daily labor, more likely to be smallholders, etc.?</p>	<p>We did not note any big differences in Ethiopia in the wages paid between women and men in that area. However, in general, there were more men doing that kind of work, more migrant men coming in. Especially, the contractors were all men and very little women were involved in that. So, there are issues with the gender balance in these economies.</p>
<p>Does the fruit and vegetable production and use have an impact on the nutrition status among different areas in Ethiopia?</p>	<p>We do not have data sets correlating the vegetable production with their consumption. But what is known is that if you have good diet diversity it has huge impacts on nutritional outcomes. That is what one wants to promote, and vegetables are an important part of diet diversity.</p>
<p>You mentioned that medium-scale tenant farmers cultivate 60 percent of this irrigated land. Do you see a move from small-scale farmers to medium-scale farmers?</p>	<p>We see people making the step from smaller to medium-scale farmers. The local farmers are looking at those coming in and are learning from them and replicating what they do. So, yes</p>
<p>Little was said about prices at the farm level compared to the rest of the value chain and compared to urban consumer prices. Would you have any insights?</p>	<p>We have looked at this during the survey and followed up during the COVID-pandemic. The big issue is the price volatility which makes it complicated for farmers to plan. If you look at the costs of off-farm costs, and we tried to look at the different costs and how important they are, it turns out that, surprisingly, the transportation costs to bring vegetables to the cities were not that important. A big contributor to the consumption price in cities is the urban distribution cost. So, a lot of small vendors, those with wheelbarrows or will small turnover of vegetables they have to survive on quite big margins which has an effect on the price the consumer pays in urban centers.</p>