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Summary of research objectives, questions, conceptual framework and methodology

Towards an improved framework for measuring the effects of agricultural development interventions on household and individual nutrition

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Research summary

In order to design effective measures to reduce malnutrition, it is important to understand the influence of intra-household dynamics throughout the impact pathways of agriculture to nutrition that includes production, sales, purchases, resource allocation and household food allocation within the households. Although many pathways and their indicators have been developed, we still do not sufficiently understand the underlining mechanism that lead to positive impacts on improved household and individual food consumption specially within the households.

Much emphasis has been given to the impact pathway from farm production to farm income, assuming that income is used for better food consumption and that is not necessarily proven in all cases, while less emphasis is given to the second pathway between household production and household food consumption, through consumption of homegrown food. Even less is known about intra-household dynamics and how these influence production diversity and results in a diverse consumption. Intra-household dynamics are mediate the relation between the production and consumption side, for example in relation to the choices people make in the household of what to produce, what to sell, what food to purchase, and where, how to prepare the food and who eats what and when. These decisions and outcomes of these decisions are important to understand, as they influence both production, consumption, activities of all household members and the linkages between the two.

This project will review the literature and data to advance our understanding of the relation between household food production and household and individual food consumption, and how intra household dynamics play a key role. The result of the research will generate policy relevant recommendations for the improved design and evaluation framework of nutrition sensitive agricultural interventions.

Objectives, research question and conceptual framework of the research

A. Objectives and Research questions

The overall objective of the study is to advance our understanding of the relation between food production and consumption and how it is mediated, affected or impacted by the intra-household dynamics and vice-versa in different contexts. Further, to translate these scientific insights into policy recommendation for nutrition-sensitive agriculture intervention's evaluation and design.

1. What is the impact of intra-household dynamics on nutritional outcomes within nutrition sensitive- agriculture interventions; with reference to
 - i. How does intra-household dynamics influence decision-making about food production, purchase, selection and preparation and intra-household food distribution?
 - ii. How do decisions (+whose decisions) in relation to the production, purchase selection and preparation and intra-household food distribution affect household and individual nutrition?

2. How can we more effectively measure intra-household dynamics and its contribution to improved food consumption, dietary diversity and diet quality?
3. What recommendations can be made to make agriculture policies and programmes, interventions and related evaluations more nutrition-sensitive through specific pathways studied in the research?

B. Theory of change for improving household food consumption and nutritional status

This proposed review aims to address the above mentioned knowledge gaps on how intra-household dynamics affect the overall impact pathway at various levels; from food production to consumption and sales, income, market access in order to achieve improved household and individual food and nutrition security.

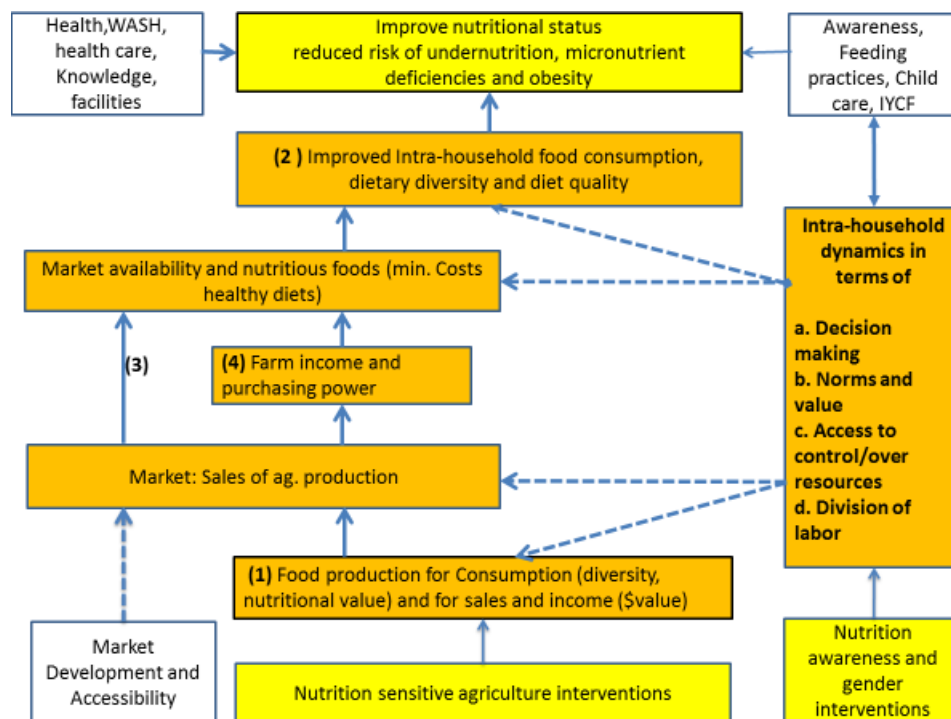


Figure 1: Overview of pathway linking agriculture to nutrition analyzed in the research

Figure 1 above presents a draft theory of change, a starting point for this review, indicating the two pathways (vertical arrows), the factors affecting the pathways (horizontal arrows), and the focus of this review (orange is the core focus; yellow is considered; white is out of our scope), all in relation to intra-household dynamics. Using the zoom in-out approach, we will explore the roles of each of these factors (boxes) - mentioned the conceptual framework - individually and its relation to intra-household dynamics. While, zooming out we will also look at it as a whole impact pathway from nutrition-sensitive agriculture intervention to improved food consumption and how these factors relate to each other.

We have numbered these core boxes. These numbers will be used to assign papers into related boxes. This will support the research methodology further, as it helps identifying current knowledge gaps throughout the production pathway and conducting a precise synthesis of results at later stage of the research.

This study will lead to a better understanding of the relation between household food production and household food consumption and how various aspects of gender relations; intra-household dynamics, norms

and values, access to control/over resources and division of labor plays key role in food production, consumption, sales, purchase and income use, preparation and food allocation within the household in different contexts, and other possible factors. It will provide recommendations for nutrition sensitive agriculture policies and programs to influence intra household dynamics and individual food consumption and nutritional adequacy; and recommendations for a framework with indicators on how to monitor and evaluate these factors in nutrition-sensitive agriculture interventions.

Chapter 5: Methodology

A. Literature review

The methodology for the literature review includes inclusion and exclusion criteria and search strategy for papers. The review will use systematic reviews, empirical papers, interventions and evaluation reports since 2000s related to nutrition-sensitive agriculture interventions that are relevant to this study and fits into on the orange boxes' topics in the conceptual framework.

We have taken two approaches of conducting literature search. The first approach is to search for empirical evidence using standard search engines like Ovid AGRIS and AGRICOLA and the second is grey literature search for intervention reports and evaluations using donor websites and reference lists. We used donor google scholar and other major websites of key institutions and networks; IOB, OECD-DAC and IFDC, FAO, IFAD, IFPRI, the World Bank, ADB, IADB and 3IE and TANGO, SUN (including SUN civil society and SUN business network), Global Compact and SPRING.

We will first look into the systematic literature review, meta-analysis or empirical analysis on multi-country datasets. Then, we will review a number of empirical articles that offer key insights on each topics or relation between two or more of these topics that have been relatively unexplored in previous studies. Keywords in title and abstracts/summary*: Food security, impact evaluation, gender, women empowerment, nutrition security, food production, production diversity, diet diversity, intra-household

STEP 2: Final Screening and data extraction

While compiling, literature from first and second approach, 18 more duplicates were identified and removed and 14 literatures published before 2000 AD was removed. The review will start with analysis a total 53 of papers available now with further chances of reduction and addition throughout the full text review and also continuous search using snowball and reference list approach. The details on the type of interventions, methodology, data analysis, results from selected papers and additionally intermediate outcome, indicators and impact along with summary from impact evaluations will extracted.

STEP 3: Inventory, Analysis and Presentation of included studies

The results will be grouped and presented as topics (boxes) based on the theory of change: -

- Food production
- Food consumption – household and individual food and nutrition security
- Market for sales
- Farm income use, purchasing power and behaviours
- Market availability for purchase of nutritious foods

The findings associated with these factors and all associated aspects of intra-household dynamics will be described within these topics. The summary of studies of the selected data will be presented as in another excel document

B. Data review

We will not conduct any primary data analysis, rather it will be a secondary data review consisting of a review of impact evaluation questionnaires, indicators and variables available from data sets. We will review the data analysis methodology to check its appropriateness to incorporate gender and intra-household dynamics throughout the pathway and individual food utilization at impact level. We presume that there will be research questions that have generated insufficient evidence to draw strong conclusions. We want to compare, contrast and critically evaluate the variables and data collected to understand the remaining research questions. This will support our quest to understand, whether these data could be used for analysis of intra-household dynamics through the impact pathways and how to use them.

The IOB data sets are also useful to test some specific relations and association identified from literature review. We plan to use necessary statistical methods like regression analysis, principle component analysis and correlation to do these analyses. The IOB data sets have most of its information at household level, therefore, once certain questions or relations between intra-household dynamics factors and nutritional outcomes are identified, we will explore the data further on its usability. Furthermore, we are exploring open and available data sets with organizations working in this sector. For example, we have identified the Living Standard Measurement Survey being used by LEI, that has an agricultural component and can be used to test and generate empirical evidence based on data analysis. Some examples of possible research question while exploring the data sets could be as following:

- a. Is the data able to show the impact of the interventions on women time use, resource allocation, bargaining and intra-household food distribution?
- b. What variables are taken into account to measure gender relations e.g. women's decisions on resource use, income use for food and non-food expenses?
- c. Are there enough valid and useful variables to calculate individual food intake and understand the dietary quality?
- d. What variables should be included in order to get insights of intra-household food distribution, decision making, and resource allocation and how could that data be obtained?

C. Limitations of the study

The major limitations of the studies are as following:

- We could not include analysis of the enabling environment pathways from agriculture to nutrition in the research. We do acknowledge that enabling environment conditions are equally important.
- We are not able to conduct primary analysis of any data sets available because of limited time, but only be able to use secondary data.