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Tools and Methods for Gender Research and Integration in Agricultural Value Chain, Market and Entrepreneurship Projects

By Jennifer Twyman and Kate Ambler



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Generating Evidence and New Directions for Equitable Results (GENDER) is CGIAR's platform designed to put gender equality at the forefront of global agricultural research for development. The Platform is transforming the way gender research is done, both within and beyond CGIAR, to kick-start a process of genuine change toward greater gender equality and better lives for smallholder farmers everywhere. gender.cgiar.org

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CONTACT

CGIAR GENDER Platform
at International Livestock Research Institute (ILRI)
PO Box 30709
Nairobi 00100, Kenya
Tel. +254-20 422 3000
GenderPlatform@cgiar.org

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*Tools and Methods for Gender
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and Entrepreneurship Projects*

Jennifer Twyman
Gender Researcher
Independent Consultant
jentwyman@gmail.com

Kate Ambler
Research Fellow
International Food Policy
Research Institute (IFPRI)
k.ambler@cgiar.org

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Abstract

While many development projects focus on value chains, markets and/or entrepreneurship to achieve objectives such as reducing poverty and gender inequalities, there is a lack of available information about the tools and methods related to gender; agriculture; and value chains, market inclusion or entrepreneurship. We identified 19 tools and methods related to gender and agricultural value chains; no tools and methods related to gender, agriculture, and market inclusion and entrepreneurship were identified. The tools and methods related to gender and agricultural value chains provide guidance to researchers and practitioners about how to integrate or mainstream gender in their projects. Many provide frameworks for how to consider gender in the context of agricultural value chains as well as guidance related to data collection at different points in the value chain and/or project cycle. Some provide guidance about how to conduct gender analysis and arrive at implementation strategies for reducing gender inequalities and empowering women. In general, the tools and methods provide explicit conceptual definitions of gender and discuss how to operationalize (consider or measure) gender in the context of value chains. This review and the matrix of information provided in the [annex](#) can be used by researchers and practitioners to identify tools and methods that can support and guide their projects as well as identify gaps that they could address in future projects.

Keywords: *gender, women's empowerment, agriculture, value chains, markets, entrepreneurship*

This review of tools for analyzing and/or addressing gender research and integration in agricultural value chain, market and entrepreneurship projects is part of a series of studies to curate and synthesize a portfolio of tested gender methods and tools. This gender research on key themes was conducted as part of the Methods module of the CGIAR Generating Evidence and New Directions for Equitable Results (GENDER) Platform. The review also has broader value to the community of researchers and development practitioners focused on rural areas and food systems..

1. Introduction

Agricultural¹ value chain, market and entrepreneurship projects are often implemented to achieve multiple development goals, such as increasing incomes and reducing poverty, while reducing gender inequalities and/or empowering women. This strategy has been used for several decades now, but challenges have emerged. For example, the literature describes cases where market/commercial crop projects targeting women are taken over by men (von Braun and Webb 1989; Kaaria and Ashby 2001). In some cases, the “women’s crop” becomes valuable, so men have incentive to produce it to earn an income (Njuki, Kaaria, Chamunorwa and Chiuri 2011). In others, women are often overburdened with care and other invisible, unpaid and/or unrecognized work such that they may not have time to participate, or social gender norms present barriers to entry and/or dictate that they spend time in other activities. Studies have documented how social norms around women’s and men’s roles can limit women’s participation for various reasons. This is exemplified by time burdens, norms that constrain women’s participation in some kinds of activities, limited mobility and more. Farnworth (2011) and Waithanji, Njuki and Bagalwa (2013) discuss how women’s mobility is restricted; they are less likely to enter some markets as vendors or purchasers, and the greater the distance to the market, the less likely women are to participate in marketing activities. Gender gaps in access to productive resources, land, credit, education and information can also limit women’s productivity and/or participation in agricultural value chains (FAO 2011).

This paper examines the tools and methods related to gender and agriculture value chains, market inclusion and/or entrepreneurship that are available to both researchers and development practitioners. There are now several websites that provide information about value chain tools, for both researchers and practitioners, such as [MarketLinks](#), and [Tools4ValueChains](#), with some resources related to gender and value chains. There is also at least one site—[Agri-ProFocus’s Gender in Value Chains](#)—that includes some references, tools and methods, as well as providing a virtual space for an online community to discuss issues relevant to gender and value chains. However, these sites do not extensively cover the tools and methods related to gender; agriculture; and value chains, market inclusion and entrepreneurship that are available to researchers and practitioners. Furthermore, there is little guidance available to researchers and practitioners about how to decide which tool or method is best suited to their work.

There have been several review articles published on gender and agricultural value chains. Most of them focus on research literature rather than on implementation tools and methods for integrating gender in value chains, market inclusion and entrepreneurship projects. For example, Ingram et al (2016) explore gender dimensions of value chains related to forest, trees and agroforestry products. Coles and Mitchell (2010), review how value-chain interventions impact gender equality both in terms of participation and the benefits derived from value chains. And Ihalainen et al (2021) review the literature to address how participation in agricultural value chains can advance or constrain women’s empowerment. Other work presents collections of cases and lessons learned to provide guidance and recommendations (e.g., KIT, Agri-ProFocus and IIRR 2012). Stoian, Donovan, Elias and Blare (2018b) focus on implementation guides for integrating gender in value-chain programs. They identify seven guides in their review that are oriented towards development practitioners to guide gender integration in agricultural value-chain development projects. Similarly, Mutua, Njuki and Waithanji (2014) review literature and tools related to gender and agricultural value chains.

1. Drawing on the definition provided by Rubin, Manfre and Barret (2009, 7) we use the term ‘agriculture’ in a broad sense to include “the science and practice of activity related to food, feed, and fiber production, processing, marketing, distribution, utilization, and trade.” As such, it includes crops and livestock as well as “forestry, wildlife, fisheries, aquaculture, floriculture, veterinary medicine, and other environmental and natural resources sciences.”

While these previous reviews provide valuable information about the literature and some of the tools and methods available, this review aims to contribute to this growing body of literature by focusing on the tools and methods available to researchers and development practitioners related to gender; agriculture; and value chains, market inclusion and entrepreneurship. It differs from the previous reviews by focusing only on tools and methods (rather than research articles) and, unlike Stoian, Donovan, Elias and Blare (2018b), we include tools and methods for research as well as implementation.

The objective of this review is to curate and summarize the tools and methods related to gender; agriculture; and value chains, entrepreneurship and/or market inclusion that are available to researchers and development practitioners. It is expected that the information will be useful for identifying the tools and methods best suited to their objectives as well as expanding their ideas on the type of objectives around gender that are possible in value chain, market inclusion and/or entrepreneurship projects. Furthermore, by identifying gaps, we hope to motivate researchers and practitioners to develop new tools and methods, or modify existing tools to address them.

The following research questions guide the review:

1. What types of tools and methods related to gender; agriculture; and value chains, market inclusion or entrepreneurship are available for researchers and development practitioners?
2. How do the tools and methods define and discuss key concepts (i.e., gender, value chains, entrepreneurship and market inclusion)?
3. How do they operationalize the key concepts? What characteristics or factors related to gender are included and/or measured? If measured, how are they measured? How do the characteristics or factors that are measured link to the underlying concepts and/or different parts of the value chain?
4. What are the main gaps in terms of the types of tools and methods available, and the topics of interest covered by the identified tools and methods?

2. Methods

To address the research questions, we follow procedures similar to those of a scoping review as outlined in Arksey and O'Malley (2005), Levac, Colquhoun and O'Brien (2010), Pham et al (2014), Peters et al (2015), and Munn et al (2018). The process includes five stages, which are discussed in more detail in this section: identifying the research questions (see the previous section), identifying relevant tools and methods, selecting tools and methods for inclusion, extracting and charting the data (related to the research questions), and summarizing and reporting the results.

2.1. Identifying relevant tools and methods

To identify relevant tools and methods, we started by searching the reference lists of relevant review articles regarding gender and agricultural value chains. These included Ihalainen et al (2021), Stoian et al (2018b), and Mutua, Njuki and Waithanji (2014). Then, we searched the reference lists of some of those articles as well (e.g., Mutua, Njuki and Waithanji 2014). Since we did not know of any review articles related to gender, agriculture, and entrepreneurship

or market inclusion, we reached out to CGIAR researchers working in this area for any relevant tools, methods or related research articles. In addition to searching reference lists and reaching out to experts, we also conducted a web-based search using Google and specifically searching CGIAR websites. Overall, we identified more than 50 related articles, documents and/or websites containing potentially relevant information.

2.2. Selecting tools and methods for inclusion

In this stage, we first grouped the 50+ references by tool or method; one tool or method often had several related articles or documents about it. We developed a list of inclusion and exclusion criteria presented in table 1 to guide the decision of which tools and methods to include in the review. These criteria helped limit the scope of the project while still addressing the objectives and research questions.

Table 1. List of inclusion and exclusion criteria generated by the authors to limit the scope of the project

Criterion	For inclusion	For exclusion
Topics	Address some aspect of gender as a primary focus (including a focus on women's inclusion)	Does not address gender (or women's inclusion) as a primary focus
	A rural development or agricultural (or agri-food) focus	Not specific to a rural or agricultural setting
	Agricultural value chains, market inclusion or entrepreneurship	Not specific to value chains, market inclusion or entrepreneurship
Type	Tool or method that can be used and/or replicated for research or development projects	Tools and methods focused on time use and labor participation
		Generic methods or approaches not specific or relevant for research or development projects
		Tools or methods that are not specific enough to be used or replicated by other researchers or development practitioners
	Research or rural/agricultural development project	Policy-focused or otherwise not directly relevant for research or development projects
Language	English	Not in English

The primary criteria were that the tool or method addressed gender as a primary focus in agricultural value chain, market inclusion and/or entrepreneurship research or development projects. While market inclusion often includes labor market participation, we specifically excluded tools and methods focused on labor markets and/or time use studies, since these were covered by [another review](#) in this series.

We included research articles that present specific tools or methods (including approaches or frameworks) related to gender in value chains, market inclusion and/or entrepreneurship in a rural or agricultural setting. We excluded research articles that did not include a tool or method with sufficient detail to enable use or replication by other researchers or development practitioners.

Furthermore, we limited the tools and methods to those focusing on gender and value chains, market inclusion and/or entrepreneurship as a primary entry point. Thus, we excluded tools and methods that primarily focused on value chains, market inclusion or entrepreneurship with little or no attention to gender. This excluded tools and methods that may have some gender integration, but gender was not the primary focus of the tool or method. (These tools and methods can be found on other platforms such as the [Tools4ValueChains](#) and [MarketLinks](#), among others.) Finally, we only included tools or methods with materials available in English.²

2. One tool had related documents in Spanish, but a brief description was found in English and it was therefore included.

2.3 Extracting and analyzing the data

After selecting the tools and methods for inclusion, we reviewed them and extracted information relevant for addressing the research questions. The matrix in the [annex](#) lists the tools and methods we selected for the review, along with standard information that was extracted across all the working papers in this series. To fully address all our research questions, we extracted additional information related to key concepts, their measures or how they were operationalized, the value chain node, and the stage(s) of the research and/or project cycle where they could be most relevant. The information extracted is listed in table 2 with a brief description and/or justification, as well as the research questions which are addressed.

Table 2. Information extracted from tools and methods

Information extracted	Explanation/justification	Research question/s
Standard matrix (presented in the annex)		
Name of tool or method	To identify and distinguish the tool or method	(1)
Link	Hyperlink for additional information	
Purpose	Explanation of what the tool or method is intended for	(1, 4)
Brief description	Brief description of the tool or method	(1, 4)
Organization(s) involved	To track CGIAR or other organizations involved	
External partner	To track which other (non-CGIAR) organizations involved	
Region(s)	Region of relevance for the tool or method	1, 4
Theme(s)	Identify the theme(s) of relevance	
Type	To classify the type of tool or method (tool, method, approach or training) ³	1, 4
Sub-type	To further classify the type of tool or method in terms of its function (framework, diagnostic, implementation guidance, M&E, action research, data collection, toolkit, analysis, other (specify)) ⁴	1, 4
Methodology	To classify the type of methodology used (quantitative, qualitative, mixed methods, other (specify))	1
Audience	To classify the type of audience the tool or method was written for: researchers, policymakers, practitioners, public, private sector, donors, community/women's organizations, students/academics, other (specify)	1, 4
Scale (unit of analysis)	To classify the scale(s) or unit of analysis the tool or method is meant for: individual, household, community, organization, national, other (specify). We included several additional other categories including: value chain, sector/economic activity, value chain node, business.	3, 4
Pilot countries	List of where the tools and methods were piloted (this could be useful for people working in particular places to see what work has been done already)	(1, 4)

3. We considered a tool anything that was used to collect or analyze data. Methods and approaches provide guidance and/or a process; we distinguished methods as more specific process and approaches as a broader way to organize ideas (such as frameworks). Training was considered a specific guide for training purposes (rather than research or project implementation).

4. Frameworks provide ways to organize ideas and information; diagnostic tools and methods are those that are primarily used for identifying problems and/or describing the context (in terms of gender in this case); monitoring and evaluation refers to tools and methods used for monitoring and evaluation purposes; action research was used to classify tools and methods that specifically used action research principles (such as involving various stakeholders to identify problems and solutions); data-collection tools and methods are those that focus on how to collect relevant data/information using quantitative or qualitative methods; toolkit was used to classify sets of data-collection tools; analysis was used to identify tools and methods that provided specific guidance on how to analyze data.

Information extracted	Explanation/justification	Research question/s
Intersectional	To identify the tools and methods that include an intersectional approach that considers social identities in addition to gender	4
Digital technologies	To identify the tools and methods that use digital technologies and the specific technologies used	4
Sources/references	To include any additional sources and references for further information	
Include in resource hub?	Author judgement about whether the tool or method should be included on the GENDER Platform Resource Hub	
Additional information		
Purpose—categories	To classify the tools and methods by purpose in terms of research/analysis or implementation/practical	1
Sub-themes	To identify which tools and methods relate to value chains, market inclusion and/or entrepreneurship	1, 4
Gender concepts	To identify the key gender concepts used and how they are defined/conceptualized	2, 4
Gender measures	To understand how gender is operationalized, what is measured or considered, and how	3, 4
Other key concepts	To understand how key concepts related to value chains, market inclusion and/or entrepreneurship are discussed and conceptualized	2, 4
Measures of these other concepts.	To understand how concepts are operationalized and to identify the aspects of value chains, market inclusion and/or entrepreneurship that are discussed and/or measured	3, 4
Alignment between conceptualization and operationalization	Judgement by authors on how well operationalization aligns with conceptualization	3, 4
Where in the research/project cycle?	To understand which tools and methods are relevant for which phase(s) of the research/project cycle. For development projects: diagnostic/planning/design, implementation, or monitoring and evaluation. For research projects: planning/design, data collection, data analysis, or reporting.	1, 4
Where in the value chain?	To understand how the tools and methods map to value chains	1, 4
Types of results	To understand the types of results outputs, outcomes, or evidence generated, and how they could be used	1, 4

Note: The research questions listed in parentheses indicate that the information is indirectly related, but not the primary or most relevant information for addressing that particular research question.

Source: [Matrix template](#) and authors' additions.

We summarized and synthesized the extracted information to address each of the research questions, and present the findings in the next section. Information related to the purpose, description, themes, sub-themes, types, sub-types, methodologies, regions, pilot countries, and how the tool or method maps to the research or project cycle and the value chain was used to classify the tools and methods, and address the first research question. For the second research question, we examined how key concepts related to gender, value chains, market inclusion and/or entrepreneurship were defined and/or discussed. Then, we further assessed how the concepts were operationalized in terms of what aspects, dimensions or factors were measured or considered, and how they were measured or considered. Finally, we used most of the extracted information to discuss how some of the gaps identified related to the different types of tools and methods, or the topics covered.

3. Results

We identified 19 tools and methods that address gender and agricultural value chains for this review (see the [annex](#)). Our search strategy did not reveal any tools or methods related to gender and market inclusion/entrepreneurship;⁵ therefore, in the rest of the paper we limit the discussion to gender and agricultural value-chain tools and methods. In this section, we discuss the findings related to each research question. First, we use different classification schemes to describe the various tools and methods. Next, we report how they define key concepts. Then we explain how key concepts are operationalized; in other words, how they are measured or addressed. Furthermore, we consider how well operationalization aligns with the conceptual discussions and definitions. Finally, we identify some key gaps in terms of topics or areas that the tools and methods do not cover. The matrix in the [annex](#) lists the tools and methods, along with information extracted about each of them.

3.1 Description of the identified tools and methods

First, we explore the tools and methods in terms of their types, sub-types, methodologies and audience(s). As can be seen in the matrix in the [annex](#), most of the tools and methods reviewed are categorized by type as an approach, about half are categorized as a tool, only three as a method, and three as training guides. Several of them are classified as a combination of these, such as approach, tool, and/or method. By examining the sub-type classification, we find that nearly all of the tools and methods (15 of 19) include frameworks (thus, their classification as an approach by type) which are useful for designing a research study or development project. A few of them present a framework for guiding what kinds of data to collect and how to organize the data, but do not include specific tools or instruments for data collection or analysis. Several of the tools and methods include implementation guidance (seven of 19), others are useful for diagnostic purposes (five of 19) and monitoring and evaluation (four of 19). Many of them present some kind of instrument(s) for collecting data, and are thus classified as either a tool or a toolkit (12 of 19).

Many of the tools and methods are qualitative in nature; some are classified as using mixed methods because they draw on both qualitative and quantitative data collection and analysis techniques. None of the tools and methods included in this review are classified as quantitative. While the pro-WEAI+MI presents quantitative measures of women's empowerment, the full methodology is comprised of a mixed-methods approach.

As indicated in the matrix in the [annex](#), most of the tools and methods are oriented towards development practitioners, researchers, students and/or academics, and a few towards policymakers and/or the private sector. In the annex, the first audience listed is the one we classified as the primary audience based on the purpose, in conjunction with any information that was explicitly given about the intended audience.

Table 3 lists the references (author and year) for each tool. These references and the identifying numbers (as listed in the [annex](#)) of the tools are used in the remaining text when discussing specific tools.

5. This is not to say there are no such tools and methods—just that our search strategy did not reveal them. Personal communication with a CGIAR researcher currently working on gender and entrepreneurship suggests that there are no (widely known) gender and entrepreneurship studies related to agriculture. Some of the gender and agricultural value-chain tools and methods discussed in this review do refer to market inclusion and/or entrepreneurship, but they are not the main topics covered.

Table 3. List of references (author and year) associated with the tools and methods

Reference	Tool or method number in annex	Tool or method name
Ahmed et al. 2018	1	Pro-WEAI+MI
Barrientos 2001	12	Gendered value chain approach
Barrientos, Bianchi and Berman 2019	12	Gendered value chain approach
Barrientos, Dolan and Tallontire 2003	12	Gendered value chain approach
Bolwig et al. 2010	11	Modified UNIDO framework
Chan 2010	5	Improving opportunities for women in smallholder-based supply chains
Dulon 2009	16	Gender in value chains: manual for gender mainstreaming
FAO 2016	9	Developing gender-sensitive value chains
FAO 2018	9	Developing gender-sensitive value chains
Farnworth 2011	14	GALS for value chains
Farnworth et al. 2018	14	GALS for value chains
Gumucio, Hurtado, Lundy and Mosquera 2016	10	Gender-responsive LINK methodology
KIT Agri-ProFocus and IIRR. 2012.	13	Challenging chains to change
Kruijssen et al. 2016	2	Framework for gender analysis in aquacultural value chains
Kruijssen, McDougall and van Asseldonk 2018	2	Framework for gender analysis in aquacultural value chains
Lundy et al. 2014	10	Gender-responsive LINK methodology
Malapit et al. 2020	1	Pro-WEAI+MI
Mayanja et al. 2016	18	Prototype guide for integrating gender into participatory market chain approach
Mayoux 2012	14	GALS for value chains
Mayoux 2015	14	GALS for value chains
Mayoux and Mackie 2008	3	Making the strongest links
McCarthy and Moon 2018	19	Consciousness Raising
Reemer and Makanza 2014	14	GALS for value chains
Rubin, Manfre and Nichols Barrett 2009	4	Integrating gender issues into agricultural value chains (INGIA-VC) approach
Sebstad and Manfre 2011a	17	Behavior change perspectives on gender and value chain development
Sebstad and Manfre 2011b	17	Behavior change perspectives on gender and value chain development
Senders, Lentink and Terrillon 2014	7	Gender in value chains: practical toolkit to integrate gender perspective in agricultural value chain development
Stoian et al. 2018a	15	5Capitals-G
Terrillon 2010	6	Gender mainstreaming in value chain development

3.1.1 Purposes of the tools and methods

By analyzing the extracted information presented above—along with the descriptions, purposes, and types of results and outcomes expected—we identified different ways to classify the tools and methods in terms of purpose. Overall, the tools and methods are designed to contribute to the reduction of gender inequalities and/or the empowerment of women. Furthermore, many of them aim to include gender considerations in agricultural value-chain projects and programs. Some focus on providing measures and/or assessments related to gender and agricultural value chains. Nearly all include gender analysis as either the main goal (such as those focused on measuring or assessing) or as a means to an end (such as using the results of a gender analysis to identify strategies to reduce gender inequalities, increase women’s participation in value chains, and/or empower women). And others focus more on understanding how the value-chain development process impacts gender roles, relations and/or inequalities.

Although not all tools say so explicitly, they are all oriented towards reducing gender inequalities and/or empowering women. Specific goals include increasing women’s participation in value chains (e.g., see Kruijssen, McDougall and van Asseldonk 2018, tool 2; and Chan 2010, tool 5), increasing the returns or benefits women receive from participating in value chains (e.g., see Kruijssen, McDougall and van Asseldonk 2018, tool 2; and Terrillon 2010, tool 6), and recognizing and valuing women’s often-invisible work in value chains (e.g., see Senders, Lentink and Terrillon 2014, tool 7; Mayoux and Mackie 2008, tool 3; and Kruijssen, McDougall and van Asseldonk 2018, tool 2).

Nearly all of the tools and methods included in this review focus on conducting or using a gender analysis to do so. Many provide a framework for conducting a gender analysis and/or ways to organize the data/evidence. Some of them provide specific tools for collecting and analyzing the data needed for conducting a gender analysis. For some of the tools and methods, conducting a gender analysis (or providing a framework for such analysis) is the main objective. For others, the gender analysis is one step towards identifying strategies to reduce gender inequalities and/or empowering women in value chains.

In addition, many of the tools and methods provide reasons for a focus on gender in value chain projects; for example, Chan (2010, tool 5) aims to raise awareness of the importance of including a gender perspective in value-chain projects. Others, such as Senders, Lentink and Terrillon (2014, tool 7) and Rubin, Manfre and Nichols Barrett (2009, tool 4), provide arguments based on the business case or social-justice case. The business case provides evidence that including women and reducing gender inequalities increases efficiencies and productivity, while the social-justice case centers around providing equal opportunities and equity of outcomes for women and men (Senders, Lentink and Terrillon 2014, tool 7). In addition, Senders, Lentink and Terrillon (2014) also describe the poverty-alleviation case, which argues for gender integration because it helps reduce poverty.

Some of the tools and methods focus on measuring or assessing gender inequalities (e.g., see Barrientos et al. 2003, tool 12) or women’s empowerment (e.g., Malapit et al. 2020, tool 1; and Markel 2014, tool 8) within value chains or the impact of value-chain development processes on gender (see Stoian et al. 2018a, tool 15). Others incorporate a gender analysis as one of the initial steps that inform the identification of strategies and/or interventions to implement to achieve objectives of reducing gender inequalities, increasing women’s participation and/or empowering women (e.g., see Rubin, Manfre and Nicols Barrett 2009, tool 4; and Mayoux and Mackie 2008, tool 3).

Several of the tools and methods explicitly state an objective around mainstreaming or integrating gender analysis in value-chain development projects (e.g., see Mayoux and Mackie 2008, tool 3; Terrillon 2010, tool 6; FAO 2016 and 2018, tool 9; Dulon 2009, tool 16; and Markel 2014, tool 8). Realizing the need for a gender-responsive approach, some value-chain tools were revised or additional modules created to integrate gender analyses into their existing frameworks. For example, the Gender-responsive LINK methodology provides a supplemental manual for integrating gender analyses into the four tools that comprise the

method (Gumucio, Hurtado, Lundy and Mosquera 2016, tool 10). Similarly, the 5Capitals-G methodology (Stoian et al 2018a, tool 15) and the Prototype Guide for Integrating Gender into Participatory Market Chain Approach (Mayanja et al. 2016, tool 18) provide additional resources to integrate gender into existing value-chain tools and methods.

A few of the tools and methods are useful for various purposes and include a guiding framework, implementation strategies, and suggestions for monitoring and evaluation. For example, the pro-WEAI+MI (tool 1)—which builds on the women’s empowerment in agriculture index (WEAI) by expanding the underlying conceptual framework and the indicators used to measure empowerment, as well as adding specific indicators related to value chains and markets—provides a guiding framework in terms of the types of indicators to be measured and how to use the indicators to identify factors that are contributing most to women’s disempowerment. As such, pro-WEAI+MI can inform project implementation strategies. If the pro-WEAI+MI data-collection tools are implemented before and after interventions, the pro-WEAI+MI can be used for monitoring and evaluation purposes. Another tool that includes both a framework and specific tools to support gender-sensitive value-chain programs is the FAO’s Developing Gender-sensitive Value Chains: A Guiding Framework (FAO 2016 and 2018, tool 9).

Finally, we classify the tools in terms of whether the primary focus is for research and analysis, or for implementation of development projects. We base this classification primarily on the main audience, considering the stated purpose and description of the tool or method, and information about the expected results or outcome from using them. Table 4 lists the tools and methods classified as primarily research/analysis or implementation.

Table 4. List of tools and methods by primary purpose: research/analysis or implementation/practical

Practical tools for implementation	Analytical research tools
Making the Strongest Links (GEVCAL)	Pro-WEAI+MI (WEAI4VC)
Integrating Gender Issues into Agricultural Value Chains (INGIA-VC) approach	Framework for gender analysis in aquacultural value chains
Improving opportunities for women in smallholder-based supply chains	Modified UNIDO framework
Gender mainstreaming in value chain development	Gendered Value chain approach (Gender Pyramid)
Gender in value chains: practical toolkit to integrate gender perspective in agricultural value chain development	Consciousness Raising
Measuring women’s economic empowerment in private sector development: Guidelines for practitioners	
Developing gender-sensitive value chains: A guiding framework	
Gender-responsive LINK Methodology	
Challenging chains to change	
GALS (for value chains)	
5Capitals-G	
Gender in value chains: manual for gender mainstreaming	
Behavior Change Perspectives on Gender and Value Chain Development	
Prototype Guide for Integrating Gender into Participatory Market Chain Approach	

Most of the tools (14 of the 19 included in this review) are classified as implementation tools to guide practitioners in the design, planning, implementation, and/or monitoring and evaluation of a project. Although many of the implementation tools and methods include some data collection and analysis instruments or guidelines, they are classified as implementation since the primary purpose is to support practitioners to identify strategies or interventions related to reducing gender inequalities and/or empowering women. Five of the tools and methods were classified as analytical, or research-focused. The research tools are primarily oriented to an audience of researchers, academics and students, while the implementation tools are primarily oriented towards practitioners. The research-focused tools and methods are primarily (theoretical) frameworks useful for designing a research study and/or organizing data for analysis—rather than specific tools or instruments for data collection and analysis.

3.1.2 How the tools and methods map to value chains and phases of the project cycle

Most of the tools and methods seek to understand and reduce gender equality across different nodes of the value chain; however, in practice many of them tend to focus more on the production node and specifically on smallholder producers. Gender inequalities in this stage of the value chain are more widely documented and known.

Some of the tools stand out in terms of how they map to value chains. One tool (Chan 2010, tool 5) focuses on supporting the private sector by providing examples of good practices that food companies could do to support women and value their often-unpaid, invisible work in value chains. GALS for value chains (tool 14) is a participatory action-research method that focuses on two scales: (1) increasing skills, incomes, resources and negotiation power of individual women and men (mainly in the production node); and (2) engaging powerful value-chain actors to create win-win opportunities. Other tools and methods, such as Gender-Aware LINK (tool 10) and Making the Strongest Links (tool 3) also use participatory approaches but, unlike GALS, focus mainly on stakeholder processes, with less emphasis on increasing individual-level skills and competencies (see Reemer and Makanza 2014, tool 14). The work by Sebstad and Manfre 2011a and 2011b (tool 17), focuses on how gender affects behaviors related to upgrading. Finally, the research by McCarthy and Moon (2018, tool 19) provides a framework for changing gender institutions (norms). It presents four elements that help individuals recognize gender as an institution (theorizing, auditing, relating to others and exploring difference) and a fifth—consciousness-raising, or the ability to see how all of the others are connected and related to power structures—that is needed for changing gender as an institution.

Some of the tools and methods for development-project implementation are designed around the project cycle (or phases of a project). For example, the Agri-ProFocus Gender in Value Chains (tool 7) and ILO's Making the Strongest Links (tool 3) tools are (roughly) organized around project phases and provide a chapter/section for how to consider and/or integrate gender at each phase (design/planning; implementation; and monitoring, evaluating and learning).

While some tools are designed more specifically for the implementation phase, some are more oriented to either the pre-planning (diagnostic) phase or the monitoring, evaluating and learning phase; others are not designed with project phases in mind but rather focus on providing a framework for how to consider gender in value-chain development more generally.

Many of the research tools and methods focus primarily on the design phase by providing a framework to support the study design and methods. Some also provide data-collection instruments. While the frameworks provide some indication of how to manage data analysis, few of the tools and methods provide specific data-analysis plans or methods—with the exception of Pro-WEAI+MI (tool 1), which includes the calculation for the index and makes STATA files available to guide the analysis process.

3.1.3 Geographical coverage

Nearly all the gender value-chain tools and methods are global in nature; in other words, they are relevant and should be applicable anywhere in the world.⁶ The [annex](#) also includes a column for pilot countries: these countries refer to the countries where the tools and methods were piloted or, in other cases, refer to the countries where studies were conducted and then the results were used to create a framework. The tools and methods have primarily been piloted in Bangladesh, Ghana, Peru and East Africa (especially Kenya), as shown in figure 1. However, we cannot be certain this presents an exhaustive list of the countries where the tools have been piloted, since not all the publications/documents about the tools and methods explicitly discuss where they were piloted.

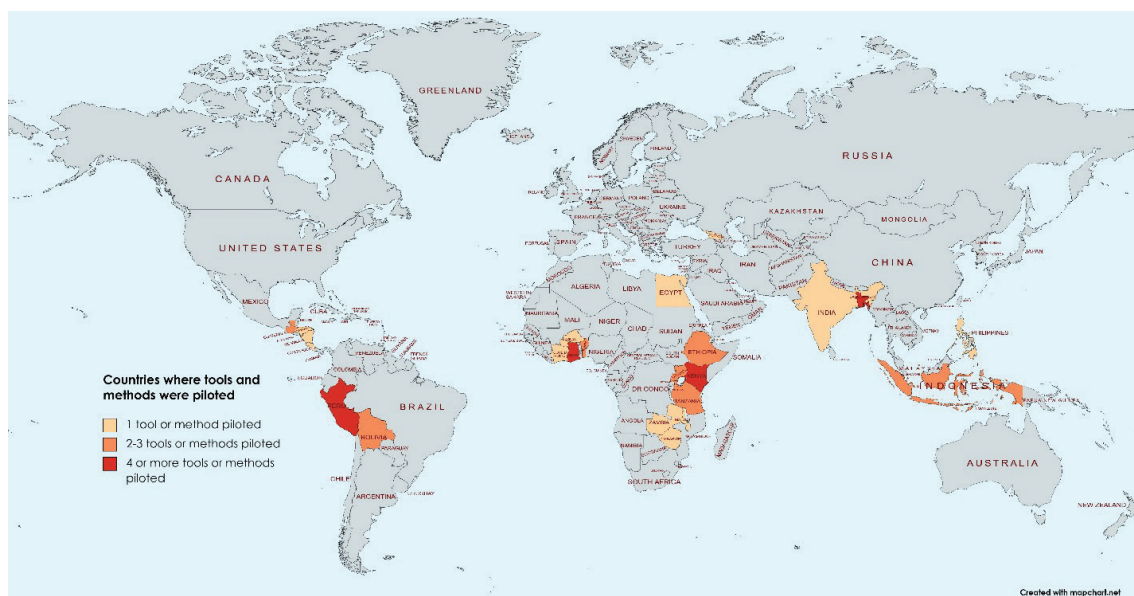


Figure 1. Map showing number of tools and methods piloted by country

3.2 Definitions and discussions of key concepts in the identified tools and methods

3.2.1 Gender concepts

Many of the tools and methods explicitly define at least some concepts related to gender that are included in their methodology. For example, many define gender as a social construct about what it means to be a man or a woman. This is related to norms, which are defined as the socially held beliefs about how women and men should behave (e.g., see Kruijssen, McDougall and van Asseldonk 2018, tool 2; Rubin, Manfre and Nichols Barrett 2009, tool 4; Terrillon 2010, tool 6; and Senders, Lentink and Terrillon 2014, tool 7).

As mentioned previously, all the tools and methods at least implicitly deal with gender inequalities and/or women's empowerment. This is evidenced by the objectives of the tools and methods, which focus on integrating gender in agricultural value chains with the (sometimes implicit) intent of reducing gender inequalities by increasing women's participation and/or creating conditions for women's empowerment.

Women's empowerment is a concept that is explicitly defined in some of the tools and methods reviewed. Many draw on Kabeer's definition of empowerment as "the process by which those who have been denied the ability to make strategic life choices acquire the ability to

6. One is classified as specific to Latin America, since the full documentation was only found in Spanish.

do so" (Kabeer 1999, 437). FAO (2016, tool 9) further explains that in relation to value chains, women's empowerment is about women's ability to shape their lives, and this often entails transforming gender norms and relations. Terrillon (2010, tool 6) discuss empowerment in terms of "both men and women gaining control over their lives by acquiring skills and abilities that enable them to make decisions, determine choices and influence economic, social and political orientations of their communities. The overall goal of empowerment should be a greater access to and control over public services and to the benefits of economic growth. Empowerment is both a process and an outcome" (Terrillon 2010, citing Canadian International Development Agency, 1994). Another definition of empowerment given is "the process through which women, who are currently most discriminated against, enable themselves or are enabled to take advantage of equality of opportunity. This includes affirmative action for women, and support for men to change those aspects of their behaviour, roles and privileges that currently discriminate against women. It is likely to include different types of support for women from different backgrounds depending on other dimensions of disadvantage, and at different levels" (Mayoux and Mackie 2008, 18, tool 3). A few of the tools and methods also draw on the four types of power presented by Rowlands (1997): power over, power to, power with, and power within (e.g., see Malapit et al. 2020, tool 1).

Rather than focus on conceptually defining gender inequalities, some of the articles provide a discussion and definitions of equality and equity. For example, Mayoux and Mackie (2008, tool 3) and Terrillon (2010, tool 6) discuss equality of opportunity as the situation where women and men have equal access to resources, power and services, as well as equal opportunities to participate and benefit from participation; and equity of outcomes in terms of situations when women and men have the freedom to choose, and thus any resulting gender differences are a result of their choices rather than discriminatory practices.

Gender mainstreaming is another gender concept that is relevant for these tools and methods, since one of the primary objectives across nearly all of them (either implicitly or explicitly) is to mainstream gender in agriculture value-chain programs and projects. Gender mainstreaming is understood as the "the integration of a gender perspective and gender analysis into all stages of design, implementation and monitoring of projects, programs, policies or planning at all levels (local, regional, national)" Terrillon (2010, 6, tool 6). Similarly, Mayoux and Mackie (2008, 18, tool 3) discuss gender mainstreaming in policy as "making the concerns and experiences of women (as the currently most disadvantaged by gender inequality) integral to the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and social spheres." Furthermore, Terrillon (2010, 7) state, "gender mainstreaming is a way of ensuring that women's economic and social rights are systematically taken into account and enforced in all spheres of activities (policy making, programming, planning, implementing and monitoring/evaluation), at all levels (local, national, regional) and that appropriate financial and human resources are earmarked for that purpose."

Gender analysis is the process of analyzing sex-disaggregated data to understand differences and inequalities between women and men, especially in terms of their roles, activities, needs and interests (Terrillon 2010, tool 6). Gender analysis is also used to identify gender-based constraints, which are defined as "restrictions on men's or women's access to resources or opportunities that are based on their gender roles or responsibilities" (Rubin, Manfre and Nichols Barrett et al 2009, 15, tool 4). Along these lines, several of the tools and methods discuss gender differences in terms of roles, responsibilities, the gender division of labor, participation in decision-making, access to and control over resources, access to benefits, returns to labor, gender relations and power dynamics. Two important concepts related to gender that are not often explicitly defined but are quite relevant include agency, which is defined as "the capacity of individual[s] ... to act independently and to make their own free choices" (Senders, Lentink and Terrillon 2014, 15, tool 7); and structures, defined as "...factors such as social class, religion, gender, ethnicity, custom, etc. which limit or influence the opportunities that individual have" (Senders, Lentink and Terrillon 2014, 15).

As several (but not all) the tools and methods acknowledge, women are not a homogenous group, and inequalities and inequities can relate to other social identities besides (and including) gender (e.g., see Mayoux and Mackie 2008, tool 3; and Rubin, Manfre and Nichols Barrett 2009, tool 4). Social identities such as gender, race, ethnicity, caste, age, education, marital status and roles in the value chain can all impact inequities and inequalities. As such, intersectionality is an important topic to consider in gender and agricultural value-chain research and development projects.

3.2.2 Value-chain concepts

Value chains are defined in several of the tools and methods. Some of them draw on the definition provided by Kaplinsky and Morris (2000; cited by Kruijssen, McDougall and van Asseldonk 2018), stating that value chains refer to “the full range of activities that are required to bring a product or service from conception, through production and transformation, to delivery to final consumers, and final disposal after use” (Kruijssen, McDougall and van Asseldonk 2018, 329, citing Kaplinsky and Morris 2000, tool 2). Mayoux and Mackie (tool 3) cite this definition as well as that of ILO’s (2006, cited by Mayoux and Mackie 2008, 9):

“A value chain is a sequence of target-oriented combinations of production factors that create a marketable product or service from conception to the final consumption. This includes activities such as design, production, marketing, distribution and support services to the final consumer. The activities that comprise the value chain can be contained within a single firm or divided among different firms, as well as within a single geographical location or spread over wider areas. The term Value Chain refers to the fact that value is added to preliminary products through the combination of other resources.”

Similarly, Rubin, Manfre and Nichols Barrett (2009, 7, tool 4) describe a value chain as “the full sequence of activities (functions) required to bring a product or service from conception, through the intermediary of production, transformation, marketing, and delivery to final consumers.” Likewise, Terrillon (2010, tool 6) and Senders, Lentink and Terrillon (2014, tool 7) discuss value chains in terms of the various activities related to transforming raw products into finished products for consumers.

Dulon (2009, tool 16) and Terrillon (2010, tool 6) add to this definition that value chains are about the relationships among actors to support the goal of increasing profits and/or value by improving efficiencies, reducing transaction costs and ensuring high-quality products that consumers value. This differs from commodity supply chains that are typically more interested in quantity of a product than quality.

As these definitions imply, there are several elements of value chains that are often further defined in the tools and methods. They describe different types of value-chain actors:

- direct actors, who are directly involved in production and transformation activities to increase the value of the project
- indirect actors or chain supporters, who provide essential services (such as financial services, extension services and technical information) for adding value to the product but who are not directly involved in the production or transformation of the product
- value chain influencers, such as policymakers, who influence the regulatory framework, policies and infrastructures at different levels and, as such, influence value chains

Some of the tools and methods, such as Senders, Lentink and Terrillon (2014, tool 7) and Lundy et al (2014, tool 10) discuss these three levels and others, like, FAO (2016, tool 9) focus on the direct value-chain actors.

Nodes and segments are other elements of value chains that are important concepts and are defined by Bolwig et al (2010, tool 11). They define a node as “the point in a value chain where a product is exchanged or goes through a major transformation or processing”, and a segment as “a ‘vertical chunk’ of a value chain between two nodes, for example from production to export, or from import to retail” (Bolwig et al 2010, p. 175).

In terms of processes within value chains that are relevant in gender analyses, the tools and methods often focus on governance and upgrading. Governance relates to the relationships, power dynamics, and influence or control that different actors have within value chains to coordinate activities, achieve greater levels of value and profit, and influence how benefits are distributed among chain actors (see Kruijssen, McDougall and van Asseldonk 2018, tool 2; and Barrientos et al 2003, tool 12). “Governance is the process by which so-called ‘lead firms’ ... organise activities with the purpose of achieving a certain functional division of labour along a value chain – resulting in specific allocations of resources and distributions of gains. It involves setting the terms of chain membership, the related incorporation/exclusion of other actors, and the reallocation of value-adding activities” (Bolwig et al. 2010, 175, citing Gereffi 1994, Kaplinsky 2000, Ponte and Gibbon 2005, and Gibbon et al. 2008, tool 11).

Upgrading refers to changes in the chain to create better conditions or higher returns to the actors. Upgrading is defined as “improving the capabilities, technologies, and institutional models, such that value chain actors are able to improve their competitiveness, or move into higher value products” (Kruijssen, McDougall and van Asseldonk 2018, tool 2), or as “a desirable change in participation that increases rewards and/or reduces exposure to risk – where rewards and risks are understood both in financial terms and with regard to outcomes related to poverty, gender and the environment” (Bolwig et al 2010, 177, tool 11).

3.3 Operationalization of key concepts

3.3.1 Gender measures and considerations

In this section we explore how the key concepts are measured or otherwise operationalized by the tools and methods included in this review. The frameworks for integrating gender in agricultural value-chain programs and projects include the following topics related to the conceptual definition of gender as a social construct. Note: this is not an exhaustive list but provides some idea of the common factors discussed in relation to gender.

Gender and social norms were considered in some of the tools and methods (e.g., see Kruijssen, McDougall and van Asseldonk 2018, tool 2). Rubin, Manfre and Nichols Barrett (2009, tool 4) include norms, or beliefs and perceptions about what is appropriate for women and men, in their framework. Similarly, Senders, Lentink and Terrillon (2014, tool 7) include norms, as institutions or rules that govern women’s behavior and participation in value chains. Gender norms underlie the following factors that were also considered or measured in the tools and methods.

Many of the tools and methods discuss women’s access to and control over resources. Assets are important resources that are a means to production, and thus relate to women’s ability to participate and receive benefits from value chains. Some of the key assets and resources considered by the tools and methods include land, information and extension services, education, and credit and financial services (e.g., see Malapit et al. 2020, tool 1; Kruijssen, McDougall and van Asseldonk 2018, tool 2; and Rubin, Manfre and Nicols Barrett 2009, tool 4). As explained by Rubin, Manfre and Nicols Barrett (2009), legal rights are another important element related to gender and agricultural value chains; they can either support or inhibit women’s access to and control over assets and resources such as land and financial services, as well as women’s employment opportunities.

Employment; labor participation; the gender division of labor; women’s multiple roles in terms of production, reproduction/care and community work; and overall workload are other factors related to gender that are considered by the tools and methods (see Ahmed et al. 2018 and Malapit et al. 2020, tool 1; Rubin, Manfre and Nichols Barrett 2009, tool 4; and Kruijssen, McDougall and van Asseldonk 2018, tool 2). Employment opportunities, access to resources, and gender norms all contribute to women’s ability to reap benefits, like income or profits, from their participation in value chains. Women often do much of the invisible work—the work that is necessary for production but is not seen, not recognized, or is undervalued (see Kruijssen, McDougall and van Asseldonk 2018, tool 2; Mayoux and Mackie 2008, tool 3; and Senders, Lentink and Terrillon 2014, tool 7). Malapit et al (2020, tool 1) also consider women’s ability to control income.

Gender norms also impact women's mobility or freedom of movement, and can thus restrict women's ability to participate in value chains and benefit from them (see Ahmed et al. 2018 and Malapit et al. 2020, tool 1; and Rubin, Manfre and Nichols Barrett 2009, tool 4). Women's agency, autonomy and participation in decision-making are other elements considered by the tools and methods included in the review (e.g., see Ahmed et al. 2018 and Malapit et al. 2020, tool 1). Leadership and group or association membership (see Malapit et al. 2020 and Ahmed et al. 2018, tool 1; and Rubin, Manfre and Nichols Barrett et al. 2009, tool 4) are other factors of interest. Finally, the tools and methods also consider power relations and governance. While many value-chain tools consider governance within the chain among different actors, the gender and value-chain tools and methods consider power dynamics and governance issues between women and men across multiple levels—including within the household, an arena not often considered by other value-chain tools and methods (e.g., see Kruijssen, McDougall and van Asseldonk 2018, tool 2; and Rubin, Manfre and Nichols Barrett 2009, tool 4).

3.3.2 Measures and considerations related to value chains

The tools and methods consider different aspects of value chains, such as direct and indirect actors. Sebstad and Manfre (2011a and b, tool 17) consider direct actors—producers, input suppliers, traders and wholesale sellers—and indirect actors—extension agents, and bank managers and staff. Mayanja et al (2016, tool 18) focus on direct value-chain actors: farmers, traders, processors and market agents.

The tools and methods also discuss different nodes and segments of value chains. Production, processing, markets, retail and wholesale are some of the different nodes or segments of the value chains that are discussed in the tools and methods (see Kruijssen, McDougall and van Asseldonk 2018, tool 2; Mayoux and Mackie 2008, tool 3; Sebstad and Manfre 2011a and b, tool 17; Mayanja et al. 2016, tool 18; and Gumucio, Hurtado, Lundy and Mosquera 2016, tool 10).

Upgrading is often associated with value-chain development or improving the outcomes of value-chain participation by different actors, with most of the tools and methods interested in how the upgrading process impacts producers, especially women producers (or women in family farming systems) and/or marginalized actors within other nodes of the value chain. Mayoux and Mackie (2008, tool 3) discuss different types of upgrading—process upgrading, which refers to increasing the efficiency of internal process; product upgrading, referring to improving products and/or adding new ones; functional upgrading or changing the mix of products; and chain upgrading, switching to a new chain—and provide guiding questions related to the gender implications of the different upgrading strategies.

While none of the tools and methods directly address entrepreneurship, a few of them briefly mention it in relation to value chains. For example, Rubin, Manfre and Nichols Barrett (2009, tool 4), Mayoux and Mackie (2008, tool 3), and Senders, Lentink and Terrillon (2014, tool 7) discuss entrepreneurship in terms of supporting and promoting women entrepreneurs, especially in processes of upgrading. Malapit et al (2020, tool 1) also discuss an indicator related to entrepreneurial mindset as related to women's empowerment.

3.3.3 Classification by scale or unit of analysis

These different measures and considerations of gender and value chains can often be measured at different levels, and studies can consider different units of analysis. In value-chain projects, the whole chain is often of interest, but data is often collected at individual, household, organization/association or business levels. Thus, it proved difficult to classify the tools and methods by the scale or unit of analysis used, because many of them presented multiple tools for data collection and analysis at different scales throughout the value chains. And, since the value chain is a system, often the tools and methods considered a different unit of analysis at different points.

Some of the tools are oriented towards individuals—trying to capture, for example, the number of women working in the various value-chain nodes or comparing the number of women and men working in each node. Others are focused on intrahousehold dynamics and understanding the patterns of labor allocation within households across multiple activities.

Still others take a more macro-level approach to understand the social and institutional context, including gender issues, that affect the functioning of the value chain and/or constrain gender equalities in it. Communities, especially considering gender dynamics and gender norms at the community level, are emphasized in others. Producer and/or trade organizations are another entry point.

3.3.4 Alignment with underlying concepts

In general, there seems to be good alignment between underlying concepts and how they are measured or operationalized. Most of the tools and methods considered in this review present a conceptual framework for gender analysis in value chains; as such, they often specify key conceptual definitions and how different elements are related. For example, there are often strong connections between gender and value-chain elements; Mayoux and Mackie (2008, tool 3) provide a checklist about how to consider gender at different stages of value chain projects; similarly, Senders, Lentink and Terrillon (2014, tool 7) provide tools for collecting relevant gender data at different moments in the project cycle, and at different points and from different actors in the value chain.

Not all key concepts are consistently well-defined. For example, nearly all of the tools and methods explicitly or implicitly refer to different parts or nodes of the value chain, but we only find one conceptual definition of nodes and segments: that provided by Bolwig et al (2010, 175, tool 11). Another example is that of upgrading. Mayoux and Mackie (2008, tool 3) refer extensively to upgrading. While they do not provide a conceptual definition for upgrading, they do discuss and define different types of upgrading and provide guiding questions related to the gender implications of the different upgrading strategies.

In addition, Rubin, Manfre and Nichols Barrett (2009, tool 4) suggest a link between upgrading and entrepreneurship; however, they do not provide a conceptual definition of either of upgrading or entrepreneurship, nor is the link between them well-described or elaborated (given this is not the main objective of their method). Furthermore, while a few studies discuss intersectionality, they do not explicitly define it—likely because it is not the main focus of the tools and methods. Those that mention it focus their discussions around ensuring that there are women representatives among the various stakeholder groups, rather than fully considering a range of identities (by age, race, ethnicity, class and so on), and how this relates to gender-based constraints and inequalities in the context of agricultural value chains (see Rubin, Manfre and Nichols Barrett 2009, tool 4; and Mayoux and Mackie 2008, tool 3).

3.4 Key gaps in tools and methods for gender research and integration in agricultural value chain, market, and entrepreneurship projects

3.4.1 Tools and methods for gender research and integration in market inclusion and entrepreneurship projects

The search strategy used for this review did not identify any tools or methods related to market inclusion or entrepreneurship. While the initial search strategy may have missed relevant tools and methods, follow-up searches using online databases did not reveal any such tools or methods. Furthermore, personal communications with a CGIAR researcher currently conducting research on gender and entrepreneurship within an agricultural context suggested that there are no widely-known tools and methods related to gender, agriculture and entrepreneurship (though there is literature related to gender and entrepreneurship in development contexts).

3.4.2 Gaps in terms of specific nodes in the value-chain tools

While many of the tools and methods include various aspects/nodes of value chains, some have a heavier focus on production and/or processing than on other nodes (such as traders, intermediaries, and so on). This limitation was also identified in Ihalainen et al (2021). In fact, many tools/frameworks still focus primarily on gender issues within the production node.

3.4.3 Addressing diversified livelihoods

Another limitation to gender and agriculture value-chain projects for development is that most of them focus on one commodity or one value chain; and, as is well documented in the literature, most rural people derive their livelihoods from multiple sources. This lack of a livelihood approach limits what a gender and value-chain project can say/conclude about the overall well-being of an individual or household. Or, how participation in one value chain may impact the ability to participate in or derive benefits from participating in other value chains.

3.4.4 Identification of needed competencies

Researchers or practitioners do not always have adequate knowledge and experience in both gender and value-chain development or research projects. Thus, it is important that teams are comprised of experts in both areas to successfully implement their research and/or development project. Mayoux and Mackie (2008, xi, tool 3), for example, point out that the guide for gender analysis in value chains and markets *Making the Strongest Links* is not a substitute for good gender-research expertise, nor is it a stand-alone tool that provides all the answers. They note that it should be used as a guide to accompany the process and provide considerations, but not as a single tool that can be implemented to solve all problems. Mutua, Njuki and Waithanji (2014) further recommend that gender and value-chain analysis be carried out by people knowledgeable of gender concerns at various levels: micro, meso, and macro. However, few of the tools and methods discuss the skills and resources necessary to implement them (Stoian et al. 2018b also discuss this). Such information would be quite useful for development practitioners and/or researchers to support decisions about what they can feasibly do in their projects, or how they should strengthen their team's competencies.

Furthermore, each project has different objectives and thus the final methods and tools used must be chosen to meet the objectives of the project. Senders, Lentink and Terrillon (2014, 6, tool 7), for instance, provide a list of tools but mention it is up to practitioners (and researchers) to decide which tools to use and implement in their project or intervention. Teams with complementary competencies in gender and value-chain development would be best placed to make such decisions.

3.4.5 Digital technologies

Many of the tools and methods reviewed provide some indication of the possibility of using digital technologies but few provide specific information or guidance on how to go about it. Only three of the tools and methods provide some specific (but limited) guidance on the use of digital technologies. The Pro-WEAI+MI (tool 1) provides STATA code for analyzing the data (see Malapit et al 2020 and <https://weai.ifpri.info/>). Making the Strongest Link discusses using cameras and computers to capture data collected from focus groups and/or participatory workshops (Mayoux and Mackie 2008, tool 3). INGIA-VC discusses the use of SMS to receive market information (Rubin, Manfre and Nichols Barrett 2009, tool 4). While these three tools discuss the use of digital technologies, there is not full documentation of the methods for using digital technologies. We know of surveys that use Computer Assisted Personal Interviewing (CAPI) and/or other software programs for designing survey questionnaires on computer, tablet, or mobile devices; and other technologies (Excel, SPSS, NVivo, Atlas-TI, and so on) are often used to analyze data, especially research-oriented data. Thus, the reporting and documentation of the use of digital technologies is likely under-reported.

3.4.6 Intersectionality

While a few of the tools and methods discuss intersectionality—at least in terms of the importance of other identities such as race, ethnicity, age and/or socio-economic status—none fully integrate an intersectional approach in such a way that the tool or method presented can be used for intersectional analysis, nor do they provide specific guidance on how to do so.

4. Discussion and conclusion

The main objective of this review was to summarize the tools and methods related to gender; agriculture; and value chains, market inclusion and entrepreneurship available to researchers and practitioners. The information summarized in this review should aid researchers and practitioners in understanding the kinds of tools and methods available for their projects and provide some guiding information about choosing which tools and methods that could be best suited for their needs. The review builds on past literature reviews and is more comprehensive than other reviews that include only a subset of the tools and methods that are reviewed in this study.

Overall, we identified and reviewed 19 tools and methods related to gender, agriculture and value chains. No tools and methods related to gender, agriculture, and market inclusion or entrepreneurship were identified. Most of the tools and methods clearly and explicitly define key concepts related to gender and value chains, and many of them describe their conceptual framework and how gender concepts relate to various value-chain concepts. These concepts and frameworks often guide the measures and considerations of gender within the value-chain concept, and provide useful data and evidence about gender inequalities and/or gender-based constraints that can be used to identify strategies and interventions to overcome them.

Overall, the tools and methods in this review cover a range of topics and can support the design, implementation, and/or monitoring and evaluation of research and development projects related to gender and agricultural value chains. While the tools and methods cover a range of gender issues across the value chain, most of the discussions are quite theoretical in nature and—while examples are given—it is not clear if all the tools and methods would be useful across a range of different types of agricultural value chains, or if a more nuanced classification of the different types of agricultural value chains would be useful.

We identified several gaps. First, we were only able to identify gender and agricultural value-chain tools and methods, indicating that there is a gap in terms of tools and methods related to gender, agriculture, and market inclusion or entrepreneurship. Second, while the tools and methods provide frameworks and instruments for collecting data relevant for gender analysis in the context of value-chain projects, most still primarily focus on farm-level production. Furthermore, few of the tools and methods are able to consider diverse livelihood strategies. Another potential gap is related to a lack of understanding about the gender expertise and competencies needed among project staff, and ensuring these tools and methods are not used to replace gender experts that can provide needed competencies related to conducting a gender analysis. There are also gaps related to tools and methods for analyzing the gender data collected, and ensuring that it is used to design effective strategies and interventions. Digital technologies are not considered by many of the tools and methods. Finally, the tools and methods do not thoroughly recognize and consider intersectionality.

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References

- Ahmed, Akhter U., Hazel Malapit, Audrey Pereira, Agnes Quisumbing, and Deborah Rubin. 2018. *Tracking Empowerment along the Value Chain: Testing a Modified WEAI in the Feed the Future Zone of Influence in Bangladesh*. Dhaka, Bangladesh and Washington, DC: USAID, IFPRI.
- Arksey, Hilary and Lisa O'Malley. 2005. "Scoping studies: towards a methodological framework." *International Journal of Social Research Methodology* 8 (1): 19–32, doi: 10.1080/1364557032000119616.
- Barrientos, Stephanie. 2001. "Gender, Flexibility and Global Value Chains." *IDS Bulletin* 32 (3): 83–93. doi:10.1111/j.1759-5436.2001.mp32003009.x.
- Barrientos, Stephanie, Lara Bianchi, and Cindy Berman. 2019. "Gender and Governance of Global Value Chains: Promoting the Rights of Women Workers." *International Labour Review* 158 (4): 729–752. doi:10.1111/ilr.12150.
- Barrientos, Stephanie, Catherine Dolan, and Anne Tallontire. 2003. "A Gendered Value Chain Approach to Codes of Conduct in African Horticulture." *World Development* 31 (9): 1511–1526. doi:10.1016/S0305-750X(03)00110-4.
- Bolwig, Simon, Stefano Ponte, Andries Du Toit, Lone Riisgaard, and Niels Halberg. 2010. "Integrating Poverty and Environmental Concerns into Value-Chain Analysis: A Conceptual Framework." *Development Policy Review* 28 (2): 173–194. doi:10.1111/j.1467-7679.2010.00480.x.
- Chan, Man-Kwun. 2010. *Improving Opportunities for Women in Smallholder-Based Supply Chains: Business Case and Practical Guidance for International Food Companies*. Bill and Melinda Gates Foundation.
- Coles, Christopher, and Johnathan Mitchell. 2010. *Gender and Agricultural Value Chains – a Review of Current Knowledge and Practice and Their Policy Implications*. ESA Working Paper 11–05. London, UK: Food and Agriculture Organization.
- Dulón, Roxane. 2009. *Género en cadenas de valor: manual para la transversalización*. Den Haag: Catholic Organization for Relief and Development Aid.
- FAO. 2011. *Women in Agriculture: Closing the Gender Gap for Development*. The State of Food and Agriculture. Rome: FAO.
- FAO. 2016. *Developing Gender Sensitive Chains: A Guiding Framework*. Rome: FAO.

- FAO. 2018. *Developing Gender-Sensitive Value Chains: Guidelines for Practitioners*. Rome: FAO. <http://www.fao.org/3/I9212EN/i9212en.pdf>.
- Farnworth, Cathy Rozel. 2011. *Gender-Aware Value Chain Development*. Accra, Ghana: UN Women.
- Farnworth, Cathy Rozel, Clare M. Stirling, Amon Chinyophiro, Andrew Namakhoma, and Rebecca Morahan. 2018. "Exploring the Potential of Household Methodologies to Strengthen Gender Equality and Improve Smallholder Livelihoods: Research in Malawi in Maize-Based Systems." *Journal of Arid Environments* 149 (February): 53–61. doi:10.1016/j.jaridenv.2017.10.009.
- Gumucio, Tatian, Jhon Jairo Hurtado, Mark Lundy, and Erika Eliana Mosquera. 2016. *LINK Methodology: Gender Responsive Manual*. Cali, Colombia: International Center for Tropical Agriculture (CIAT).
- Ihalainen, Markus, Sumer Shaikh, Gaudiose Mujawamariya, Sarah Mayanja, Sounkoura Adetonah, Katie Tavenner, and Marlène Elias. 2021. "Promise and Contradiction: Value Chain Participation and Women's Empowerment." In *Advancing Gender Equality through Agricultural and Environmental Research: Past, Present and Future*. Washington, D.C.: IFPRI. <https://doi.org/10.2499/9780896293915>.
- Ingram, Verina, Merel Haverhals, Sjoerd Petersen, Marlene Elias, Bimbika Sijapati Basnett, and Sola Phosiso. 2016. "Gender and Forest, Tree and Agroforestry Value Chains Evidence from the Literature." In *Gender and Forests: Climate Change, Tenure, Value Chains and Emerging Issues*, 13–26. New York, USA: Routledge.
- Kaaria, Susan K., and Jacqueline A. Ashby. 2001. An Approach to Technological Innovation That Benefits Rural Women: *The Resource-to-Consumption System*. Working Paper. Participatory Research and Gender Analysis (PRGA); Consultative Group on International Agricultural Research (CGIAR); Future Harvest. <https://cgispace.cgiar.org/handle/10568/69999>.
- Kabeer, Naila. 1999. "Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment." *Development and Change* 30: 435–64.
- KIT, Agri-ProFocus and IIRR. 2012. *Challenging chains to change: Gender equity in agricultural value chain development*. Amsterdam, Netherlands: KIT Publishers, Royal Tropical Institute.
- Kruijssen, Froukje, Genevieve Audet-Belanger, Afrina Choudhury, Charles Crissman, Jens Peter, Tang Dalgaard, Claire Dawson, et al 2016. *Value Chain Transformation: Taking Stock of WorldFish Research on Value Chains and Markets*. Working Paper AAS-2016-03. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems.
- Kruijssen, Froukje, Cynthia L. McDougall, and Imke J.M. van Asseldonk. 2018. "Gender and Aquaculture Value Chains: A Review of Key Issues and Implications for Research." *Aquaculture* 493 (August): 328–337. doi:10.1016/j.aquaculture.2017.12.038.
- Levac, Danielle, Heather Colquhoun, and Kelly K. O'Brien. 2010. "Scoping Studies: Advancing the Methodology." *Implementation Science* 5 (September). doi:10.1186/1748-5908-5-69.
- Lundy, Mark, Alexandra Amrein, Hurtado, Jhon Jairo, Gertjan Becx, Nancy Zamierowski, Fernando Rodriguez, and Mosquera, Erika Eliana. 2014. *LINK Methodology: A Participatory Guide to Business Models That Link Smallholders to Markets*. Cali, Colombia: International Center for Tropical Agriculture (CIAT).
- Malapit, Hazel, Catherine Ragasa, Elena M. Martinez, Deborah Rubin, Greg Seymour, and Agnes Quisumbing. 2020. "Empowerment in Agricultural Value Chains: Mixed Methods Evidence from the Philippines." *Journal of Rural Studies* 76 (May): 240–253. doi:10.1016/j.jrurstud.2020.04.003.
- Markel, Erin. 2014. *Measuring Women's Economic Empowerment in Private Sector Development: Guidelines for Practitioners*. Donor Committee for Enterprise Development (DCED).
- Mayanja, Sarah, Sivia Barone, Margaret McEwan, Nadezda Amaya, Claudio Velasco, Thomas Bernet, Graham Thiele, et al 2016. *Prototype Guide for Mainstreaming Gender in the Participatory Market Chain Approach*. Lima, Perú: International Potato Center. <http://rgdoi.net/10.13140/RG.2.2.21568.94722>.

- Mayoux, Linda. 2012. "Gender Mainstreaming in Value Chain Development: Experience with Gender Action Learning System in Uganda." *Enterprise Development and Microfinance* 23 (4): 319–337. doi:10.3362/1755-1986.2012.031.
- Mayoux, Linda. 2015. *Growing the Diamond Forest: Mainstreaming Gender Justice and Social Inclusion in Value Chain Development*. GALs Implementation Manual Series. Oxfam Novib.
- Mayoux, Linda, and Grania Mackie. 2008. *Making the Strongest Links: A Practical Guide to Mainstreaming Gender Analysis in Value Chain Development*. Addis Ababa: International Labour Office.
- McCarthy, Lauren, and Jeremy Moon. 2018. "Disrupting the Gender Institution: Consciousness-Raising in the Cocoa Value Chain." *Organization Studies* 39 (9): 1153–1177. doi:10.1177/0170840618787358.
- Munn, Zachary, Micah D. J. Peters, Cindy Stern, Catalin Tufanaru, Alexa McArthur, and Edoardo Aromataris. 2018. "Systematic Review or Scoping Review? Guidance for Authors When Choosing between a Systematic or Scoping Review Approach." *BMC Medical Research Methodology* 18 (1): 143. doi:10.1186/s12874-018-0611-x.
- Mutua, Edna, Jemimah Njuki, and Elizabeth Waithanji. 2014. *Review of Gender and Value Chain Analysis, Development and Evaluation Toolkits*. ILRI Manual 10. Nairobi, Kenya: International Livestock Research Institute.
- Njuki, Jemimah, Susan Kaaria, Angeline Chamunorwa, and Wanjiku Chiuri. 2011. "Linking Smallholder Farmers to Markets, Gender and Intra-Household Dynamics: Does the Choice of Commodity Matter?" *The European Journal of Development Research* 23 (3): 426–443. doi:10.1057/ejdr.2011.8.
- Peters, Micah D.J., Christina M. Godfrey, Hanan Khalil, Patricia McInerney, Deborah Parker, and Cassia Baldini Soares. 2015. "Guidance for Conducting Systematic Scoping Reviews." *International Journal of Evidence-Based Healthcare* 13 (3): 141–46. doi:10.1097/XEB.0000000000000050.
- Pham, Mai T, Andrijana Rajić, Judy D Greig, Jan M Sargeant, Andrew Papadopoulos, and Scott A McEwen. 2014. "A Scoping Review of Scoping Reviews: Advancing the Approach and Enhancing the Consistency." *Research Synthesis Methods* 5 (4): 371–85. doi:10.1002/jrsm.1123.
- Reemer, Thies, and Maggie Makanza. 2014. *Gender Action Learning System: Practical Guide for Transforming Gender and Unequal Power Relations in Value Chains*. The Hague, Netherlands: WEMAN, Oxfam, GIZ, BMZ.
- Rowlands, Jo. 1997. *Questioning Empowerment: Working with Women in Honduras*. Oxford: Oxfam. <https://policy-practice.oxfam.org/resources/questioning-empowerment-working-with-women-in-honduras-121185/>.
- Rubin, Deborah, Cristina Manfre, and Kara Nichols Barrett. 2009. *Promoting Gender Equitable Opportunities in Agricultural Value Chains: A Handbook*. Washington, D.C.: USAID.
- Sebstad, Jennefer, and Cristina Manfre. 2011a. *Behavior Change Perspectives on Gender and Value Chain Development: A Framework for Analysis and Implementation*. FIELD Report 12. Washington, D.C.: USAID, ACDI VOCA, fhi360.
- Sebstad, Jennefer, and Cristina Manfre. 2011b. *Behavior Change Perspectives on Gender and Value Chain Development: Tools for Research and Assessment*. Washington, D.C.: USAID, ACDI VOCA, fhi360.
- Senders, Angelica, Anna Lentink, and Jacqueline Terrillon. 2014. *Gender in Value Chains: Practical Toolkit to Integrate a Gender Perspective in Agricultural Value Chain Development*. Agri-ProFocus.
- Stoian, Dietmar, Jason Donovan, Marlène Elias, and Trent Blare. 2018b. "Fit for Purpose? A Review of Guides for Gender-Equitable Value Chain Development." *Development in Practice* 28 (4): 494–509. doi:10.1080/09614524.2018.1447550.
- Stoian, Dietmar, Gennifer Meldrum, Hugo Lamers, Trent Blare, Marlène Elias, and Jason Donovan. 2018. "Exploring a Gender-Responsive Asset-Based Approach to Enhance the Transformative Potential of Value Chain Development in Guatemala, India and Peru." In conference *Rural Transformation in the 21st Century: The Challenges of Low-Income, Late-Transforming Countries*, 8. Vancouver.

- Terrillon, Jacqueline. 2010. *Gender Mainstreaming in Value Chain Development*. Netherlands: Corporate Network Agriculture SNV.
- UNIDO. 2009. *Agro-Value Chain Analysis and Development: The UNIDO Approach*. A staff working paper. Vienna: United National Industrial Development Organization.
- von Braun, Joachim and Patrick J R Webb. 1989. "The Impact of New Crop Technology on the Agricultural Division of Labor in a West African Setting." *Economic Development and Cultural Change* 37 (3): 513–34. The University of Chicago Press: 513–534. doi:10.1086/451740.
- Waithanji, Elizabeth M., Jemimah Njuki, and N. Bagalwa. 2013. "Gendered Participation in Livestock Markets:" In Women, *Livestock Ownership and Markets: Bridging the Gender Gap in Eastern and Southern Africa*. New York, USA: Routledge.



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