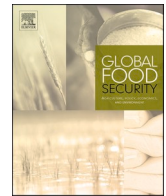


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## Gender dynamics in agrifood value chains: Advances in research and practice over the last decade

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### ABSTRACT

This paper reviews knowledge generated over the past 10 years on gendered patterns to engagement, returns on engagement, and power relations in agrifood value chains. It examines how research has advanced, evidence of improvements in gender equality and women's empowerment, and the circumstances under which any advances have happened. Gender inequalities in value chains remain significant though they vary by value chain type and node. Over the past decade, research questions have shifted from 'why' to 'how' women participate in agrifood chains and intersectional dimensions of gender inequality and power imbalances are increasingly a part of analysis, though the collection of intersectional data – quantitative, in particular – is still limited. Research and practice have shifted to include a focus on restrictive gender norms and gender transformative approaches that engage with both men and women. Robust, national and multi-country data on gender relations beyond the primary agricultural sector is scarce, which hinders the tracking of changes in gender relations and inclusivity in value chains over time and across contexts as well as on intersecting forms of inequalities and their impacts on value chain performance. Beyond production node, national surveys continue to provide limited insights about gendered patterns of participation and benefits in different value chains and different nodes such as processing, trade, and transport. Companies have a role to play to ensure that their value chains do not contribute to gender inequality and can use international instruments for responsible business conduct, and gender specific supporting materials that have become available. However, evidence will need to be collected on how and to what degree they do. Voluntary standard systems may have a role to play but need guidance to improve the incorporation of gender equality metrics.

### 1. Introduction

Agriculture, including forestry, aquaculture and fisheries, continues to be the main livelihood for a majority of poor rural populations in low- and middle-income countries (FAO, 2023). As the sector transforms - influenced by commercialization and globalization of agrifood value chains, agricultural innovations and climate change - gender relations are also transforming (Farnworth et al., 2013; Sachs, 2019). Analyses of gender dynamics are critical to value chain development as they make explicit that opportunities, benefits and obstacles are different, and are experienced differently, depending on a person's gender and social positioning. Intersectional gender analysis supports adherence to the universal value expressed in the Sustainable Development Goals (SDGs)

as "leave no one behind" by shedding light on the gendered experiences of different people.

This paper reviews knowledge generated over the past 10 years - since the first FAO State of Food and Agriculture (SoFA) report on Gender and Agriculture in 2010/2011 - on gendered patterns of engagement, returns on engagement, and power relations in agrifood value chains. The research questions for this paper are: how has research on gender equality in agrifood value chains advanced since 2010? Is there evidence of improvements in gender equality and women's empowerment? And if so, under what circumstances have these taken place? We respond to this question based on a narrative review which sought to identify the evidence available related to gender equality and women's empowerment in agrifood value chains. This method is

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appropriate for this question as the intent is to describe the topic's current status, include a wide variety of studies and provide an overall summary, with interpretation and critique (Sukhera, 2022). We use the *Gendered Food Systems* framework by (Njuki et al., 2022) as a reference point, focusing on the value chain component in relation to the four gender dimensions: women's agency; access to and control over resources; gendered social norms; and policies and governance. We highlight evidence related to successful approaches and the outcomes that are achieved.

The literature search was conducted in Google scholar (June–August 2022), JSTOR and Science Direct (August 2023) using search terms derived from the Njuki et al. (2022) conceptual framework, including: value chain, gender equity, access and control over resources, women's agency, policies, governance, gendered social norms, combined with specific crops and commodities. In addition, reference lists from certain key publications (e.g. Ihalainen et al., 2021) were assessed to identify key articles. The search included both peer-reviewed and grey literature published since 2010, and written in English. The search covered the agrifood sector as a whole, but limited the scope to low- and middle-income countries (LMICs). Articles were then excluded or included based on relevance, which was discerned from the abstract. Apart from this search process, our analysis raised new topics that merited inclusion, for which further searches were conducted using specific key words.<sup>1</sup> We undertook additional searches in August 2023 to elaborate findings on women's entrepreneurship using key words such as gender/women AND entrepreneurship/microenterprises/small and medium enterprises/self-employment/agrifood processing/agrifood trade. Throughout, all searches were restricted to agrifood value chains and to LMICs. Eventually not all articles were cited in this manuscript due to word length limitations.

This paper is organized into seven sections. We begin by presenting thinking on core aspects of gender dynamics in value chains that has emerged over the past 10 years, namely: gender division of labour across chains and chain nodes (section 2); access to and control over resources (section 3); decision-making and changing power relations (section 4); and, gendered social norms (section 5). We then look at the evidence on effective interventions to address gender inequality in agrifood chains (section 6). Finally, we discuss key messages coming from the review and draw conclusions (section 7).

## 2. Gender division of labour across chains and chain nodes

As was the case 10 years ago, the gender division of labour for specific chains continues to be an entry point for many studies as a diagnostic of the status quo. A substantial number of studies continue to show that men participate at higher rates than women in more capital- and resource-intensive value chains and segments where profit margins are higher, while women are often overrepresented in the domestic and informal value chains, and where labour-intensive, painstaking, poorly paid work is involved (Bymolt et al., 2018; Huyer, 2016; WFP, 2017). For example, in Kenya, men dominate higher-profit export-oriented value chains while women dominate most stages in the domestic avocado value chain, which is explained as being due to their less developed financial and business skills (Oduol et al., 2017). In fisheries in Zanzibar, Zambia and Egypt women tend to trade in medium-to low-value species, are frequently excluded from the most lucrative chains, and trade in smaller volumes (Farnworth et al., 2015; Fröcklin et al., 2013). Across LMICs, smallholder poultry value chains, which are on average less profitable than larger livestock chains, are dominated by women (Almayehu et al., 2018), but as profits increase in livestock, women's

control over the activities and income often decreases (Njuki et al., 2011).

However, the past 10 years has also seen recognition that women often play significant roles in value chains considered to be "men's domains" in smallholder agriculture, though their participation may be poorly captured (Butz, 2013; Fröcklin et al., 2013; Gopal et al., 2020; Ihalainen et al., 2020). Women's labour contributions are also less visible when they work as unpaid family workers or as casual wage labourers in global value chains (Barrientos, 2014).

Women are not always excluded from more commercially-oriented value chains, but their possible contributions are mediated by the type of commodity and product, production system and by local circumstances. In some global value chains like shea butter and palm oil, women are involved in all activities and value chain nodes and can exercise significant market power (Scheiterle and Birner, 2023). A six-country nationally-representative study in Africa analysed women's labour across different crops and found no evidence of systematic segregation of women into lower profit value chains (Palacios-Lopez et al., 2017). A review of 20 informal livestock and fish value chains found no consistent gender trends with respect to participation in value chain activities: in a minority of value chains men (-only) or women (-only) dominated all nodes; and, in a minority of value chains, men and women were equally involved across all nodes (Grace et al., 2015). Joint family production is common in Asia, Latin America and parts of Africa, which underscores the importance of analysing intra-household gender relations beyond labour participation.

Lower decision-making over outputs may discourage women from participating in chains dominated by men, even when profits are higher. In coffee value chains in Uganda, 70% of men admitted to keeping all profits (Mayoux, 2012) and in horticulture in sub-Saharan Africa, women received only 38% of the profits despite providing similar labour to men (Rubin et al., 2019). In Papua New Guinea women assisted in cash crop production, which was controlled by men, but their priority was to produce and market food crops over which they controlled both production and the income earned (Curry et al., 2019).

A large share of rural women's work continues to be in primary production (Rubin et al., 2019) and research continues to focus on this node (Pyburn and Kruijssen, 2020). But the midstream of value chains is crucial for rural transformation (Reardon, 2015). Globally, food processing, trading and services are estimated to provide on average 11–12% of women's and men's employment (FAO, 2023) and over 20% of total employment in many countries in Africa, Asia and Latin America (Dolislager et al., 2021). Like in primary production, men are more likely to dominate activities perceived as heavier, requiring a larger capital investment, higher mobility and more interactions with outsiders (Mayoux, 2012; Toruño Morales, 2013). Fewer women than men are involved in the more profitable transport or large-scale trade (de Brauw et al., 2021; Durr, 2018; Masamha et al., 2018; Rubin et al., 2019).

Where processing activities are involved, women tend to be involved more than men (Mayoux, 2012; Masamha et al., 2018; de Brauw et al., 2021; Toruño Morales, 2013). FAO (2023) estimates that globally women comprise around half of all workers in food processing and services and 40% of workers in the manufacture of non-food agricultural products. These numbers do not take into account the roles women play in food preparation and processing for home consumption. The proportion of women in trade varies depending on the value chain, scale and geography: for example, in fish value chains, involvement varies from none to almost all traders being women (Farnworth et al., 2015; Kruijssen et al., 2018). While a smaller share of wholesale traders are women (FAO, 2023; Rubin et al., 2019), women are key to retailing and marketing for domestic and informal markets particularly near urban centres, and retail is an important source of independent self-employment for women (Durr, 2018; Toruño Morales, 2013). Around half of retail workers globally are reportedly women (FAO, 2023), but this number varies significantly across countries. Greater effort has been made over the past 10 years to document the gendered labour patterns, power dynamics and welfare impacts of engaging in

<sup>1</sup> An earlier version of this paper was prepared as a background paper for the Food and Agriculture Organization of the United Nations (FAO) report on the *Status of Women in Agrifood Systems* (FAO, 2023). It cited a longer and more elaborate set of references.

off-farm activities linked to specific value chains as well as comparatively across chains.

In line with the growing attention to gender in the midstream of value chains, gendered aspects of entrepreneurship in agrifood value chains have become a prominent area of research. Entrepreneurship is a key livelihood source for women, particularly in LMICs where wage employment opportunities for women remain limited. Nordhagen (2020) estimates that women own between 31 and 38% (on average) of formal small and medium-sized businesses in LMICs and most of these businesses are in the agrifood sector. Women are over-represented among microenterprise owners. In Nigeria, for example, 80–90% of the street-food vendors are estimated to be women. Women-run enterprises tend to have lower sales and profits (e.g. Bruhn, 2009 for Latin America; Nix et al., 2016 for sub-Saharan Africa), either due to segregation into sectors with limited profit and growth potential, or because they face distinct constraints and pressures that affect their profits including having to prioritize savings and investments in household assets and children's education at the expense of investments in their businesses, hiding assets to protect from other family members, greater home responsibilities and care burden that affect the time spent in their business (Friedson-Ridenour and Pierotti, 2019). Studies not only explore factors to explain gender profit gaps in LMICs (e.g. Hardy and Kagy, 2018; Van den Broeck et al., 2023) but also look at the impacts on women who enter sectors traditionally dominated by men (e.g. Das et al., 2023; Goldstein et al., 2019).

Moreover, the growth of global value chains over the past decades has created wage and salary employment opportunities particularly for young women and migrants from remote rural areas (Fabry et al., 2022; Said-Allsopp and Tallontire, 2015). While this is not a new trend and was already highlighted in SOFA 2010–11, more evidence has emerged on the gendered welfare implications of wage employment in agribusinesses linked to global value chains. A strand of the literature emphasizes positive developments in wage employment, including women workers' preferences for contracts in these businesses (Van den Broeck et al., 2016), and the potential of wage employment in agribusinesses to contribute to different dimensions of women's empowerment (Krumbiegel et al., 2020; Van den Broeck and Maertens, 2015). However, many studies remain sceptical (e.g. Osabuohien et al., 2019). Within wage employment in agrifood enterprises, women in LMICs continue to be segregated into low-skill, informal and casual jobs (Basnett et al., 2016; Grace et al., 2015; Li, 2015; Shackleton et al., 2011), while men comprise the majority of managerial and full-time positions (UN Women, 2020). Wages in the agrifood businesses are consistently lower for women than men.<sup>2</sup> Women's wages are often lower because women are segregated into low-wage sectors (Durr, 2018) but they can be significantly lower than those of men, even for the same activities (Briones, 2019; de Brauw et al., 2021; Kruijssen et al., 2018), suggesting pervasive gender discrimination.

Although often not on equal terms as men, women's greater participation in higher value chains and in off-farm work along the value chains, both as entrepreneurs and wage employees, can result in benefits in terms of increased income, food security, and even empowerment (e.g. Ihalainen et al., 2021; Said-Allsopp and Tallontire, 2015). Alongside the benefits, there are worrisome trade-offs in terms of exposure to health risks and gender-based harassment, abuse and exploitation in factories, plantations and markets (Hill and Vigneri, 2014; Ihalainen et al., 2021; Mayoux, 2012). For example, the risk of gender-based violence can increase for women who move into sectors traditionally dominated by men (Castañeda Carney et al., 2020; Fröcklin et al., 2013).

Furthermore, women are not a homogeneous social category and opportunities in agrifood value chains are frequently shaped by

intersecting inequalities related to, for example, age (Mdege et al., 2022), marital status (Mudege et al., 2020), ethnicity (e.g. Basnett et al., 2016), and status within the household and the wider community (Bymolt et al., 2018; Kibere et al., 2014; Oduol et al., 2017). Data and evidence with an intersectional lens, particularly from large-scale quantitative data, are scarce, but awareness about the importance of considering intersectionality in data collection and analysis, is increasing.

### 3. Access to and control over resources

Women's lower access to and control over resources often limits their participation and benefits in higher value agrifood value chains and activities within chains, increasing their invisibility and marginalization in agrifood systems (Basnett et al., 2016; Coles and Mitchell, 2011; Ihalainen et al., 2021; Njuki et al., 2011; Oduol et al., 2017). Many studies continue to highlight the significant inequalities that exist in regards to access to and control over key resources and inputs for agrifood value chains development including land, labour, credit, information, extension, training, and technology (Huyer, 2016; Koscec et al., 2023). These inequalities are evident not only in crop value chains, but also in livestock, fisheries and forestry (Elias et al., 2023). Gender differences in access to resources contribute to significant gender gaps in farm productivity (see Puskur et al., 2023 for a review) and firm profits (Nix et al., 2016). These gender gaps in farm productivity and firm profits are important to continue to address along with the often-large part of the gap that is linked to differences in returns to inputs and structural inequalities (Hardy and Kagy, 2018; Nix et al., 2016; Puskur et al., 2023).

Secure tenure over land is a critical asset for agricultural livelihoods; it may affect women's ability to achieve surplus production and may also affect segregation in particular value chains. In Papua New Guinea, women generally find it difficult to claim 'ownership' rights to perennial export crops, which require longer term tenure over land, but they can access land for temporary food crops for sale at local markets since it does not challenge customary land tenure rights in patrilineal societies (Curry et al., 2019). Women in households that owned land in Nigeria were significantly more likely to cross-over into more profitable value chains (Das et al., 2021). Women with insecure rights to land can be pushed off their land with increased commercialization - for example in the establishment of oil palm plantations in Indonesia (Basnett et al., 2016) - and into casual and precarious labour on the plantations (Elmhirst et al., 2015; Li, 2015). Across LMICs, women tend to be disadvantaged in terms of land ownership and tenure security (Doss et al., 2015; Gumucio, 2016; Kieran et al., 2015) and when they do own land, their holdings tend to be smaller and of poorer quality than those of men (Bymolt et al., 2018; Ejike et al., 2018; Franke et al., 2019).

Access to capital to upgrade activities in value chains is a major barrier for both men and women, but it remains a more significant constraint for women (Ejike et al., 2018; Ingram et al., 2015; Oduol et al., 2017). In global cocoa value chains in Uganda and India, 73% of men compared with 61% of women could access credit and finance, if needed (Barrientos, 2014). Analysis of 28 different commodities in Guatemala confirms that women are concentrated in activities where entry barriers and returns are low, whereas men tend to be over-represented in value chain nodes with high entry costs and high returns (Durr, 2018). In pigeon pea and cereal value chains in Malawi, minimum resource requirements keep women in retailing and in labour-intensive, local processing (seed selection, seed planting, harvesting, storage, winnowing, and cooking), whereas men dominate as large-scale buyers and processors (Me-Nsope and Larkins, 2015). In the shea butter value chain in Ghana, limited resources (like cheap credit, affordable and reliable transport) and access to markets hinder women's ability to grow their business and increase profits (Aikins et al., 2018). Liquidity constraints have been linked to lower productivity on female-managed plots compared with male-managed plots

<sup>2</sup> Note: this is consistent with other sectors globally. UN Women contend that 23% is the average gender wage gap globally. See: <https://www.unwomen.org/en/news/in-focus/csw61/equal-pay>.

(Palacios-López and López, 2015).

In addition to capital, women's unequal access to marketing groups, networks and training impacts on their ability to fully benefit from commercialization (Aikins et al., 2018; Mudege et al., 2020). In Ethiopia, women comprise only 20% of cooperative members despite being about 50% of farmers in the country (IFC, 2016) and women's representation in management and leadership positions in cooperatives remains low (Katothya, 2017; Me-Nsope and Larkins, 2015). The result is lower exposure to extension and business training for women (Bamber and Staritz, 2016), and lower access to profitable markets, limiting women to cultivating 'easy and cheap' crops (Fischer et al., 2020). Inclusive rural organizations can play an important role in capacity development for women producers, processors and sellers; women often have lower levels of education and poorer literacy skills than men, which is linked to their higher concentration in low-skill activities across diverse value chains (Aikins et al., 2018; Bymolt et al., 2018).

Research continues to find large disparities in the adoption of agricultural technologies between men and women (Rola-Rubzen et al., 2020). Studies show that technologies (e.g. improved, breeds, storage facilities) are not often developed with women's preferences and constraints in mind (Ashby and Polar, 2019). Women in smallholder processing need access to appropriate processing technologies to increase productivity, production, and product quality, but oftentimes, they work with outdated machinery, which was not built to suite women's physiques (Ejike et al., 2018; Nwankwo, 2016). Traditional technologies hinder women's productivity (Aikins et al., 2018).

Women are also disadvantaged in access to labour. Women managers spend on average 22% more time per hectare on their plots and are more reliant on exchange labour than male managers, because they receive 34% less family labour (Palacios-López and López, 2015). They also use less hired labour, not least because of social norms around supervising male labour (Radel et al., 2012; Backiny-Yetna et al., 2015).

In addition, women world-wide spend far more time in child care and domestic work than men (UNDESA, 2023), and women's unpaid workload has consistently been shown to limit engagement and time spent in more profitable markets as independent entrepreneurs or as employees in agrifood value chains (Adam et al., 2020; Alemayehu et al., 2018; Butz, 2013; Djurfeldt et al., 2018; Lyon et al., 2017; Masamba et al., 2018; Peters et al., 2019). It has also been linked to lower productivity and profits (Palacios-López and López, 2015), as well as negative impacts on food security and nutrition (HLPE, 2023), including women's own nutrition (Vemireddy and Pingali, 2021). Value chain interventions can also increase women's workload (Baltenweck et al., 2021). (We come back to this in section 5 as well.)

#### 4. Decision-making and changing power relations

The last decade has seen significant advances in measuring women's agency and empowerment in agriculture including the Women's Empowerment in Agriculture Index (WEAI) (Alkire et al., 2013; Quisumbing et al., 2023). The development of quantitative and qualitative instruments to collect better data on different dimensions of empowerment has influenced a large body of research and most recently, the WEAI was extended to specifically measure empowerment in and across value chains (Malapit et al., 2023). In line with the methodological developments, many more value chain studies have examined where women do or do not have decision-making power, which is a key component of agency. Often women's decision-making is linked to products that are traded locally or informally, where women play key roles (Ihalainen et al., 2021). For example, in dairy value chains in Kenya, men often make major decisions for commercially traded milk while women make decisions over milk that is intended for home consumption or local and informal markets (Tavener and Crane, 2018). In some cases, participation in higher remunerated nodes (such as processing and trading) is associated with higher autonomy and decision-making power for women, such as in the Philippines (Malapit

et al., 2020). One study documents women's decision-making power specifically in matrilineal societies (Aker et al., 2017). Recent studies show mixed evidence as to actual improvements in women's participation, benefits and empowerment through value chain development (Ihalainen et al., 2021), especially when engagement is as unpaid family workers or casual labourers, and without improvements in decision-making and power relations.

A growing topic for research is how women can increase their sphere of decision-making in agrifood chains. Wage employment in agribusinesses can increase women's financial independence and their bargaining power in the household (Said-Allsopp and Tallontire, 2015). In Senegal's horticulture sector, women's employment is associated with higher assets, control over income and agency (Krumbiegel et al., 2020). Other studies are less optimistic, highlighting that even though wage employment is associated with higher control over household income, it does not always lead to empowerment because women continue to face numerous constraints, including restrictive gender norms (Kruijssen et al., 2018; Rubin et al., 2019). In Ecuador, from men's perspectives, field work "earns" women the right to make production-related decisions, and off-farm employment can increase women's participation in decision-making and bargaining power: bringing in a higher share of the household wealth can bolster women's decision-making in agriculture (Twyman et al., 2015). Even small amounts earned by women can have a significant impact on recognition for their work within the household (Elias and Arora-Jonsson, 2017). Interestingly, education is, in some cases, a contrary factor to women's decision-making related to agriculture: in the Ecuadorian study, from men's perspectives, the more educated their wives are, the less likely they are to participate in agricultural decision-making (Twyman et al., 2015). Agriculture was considered less prestigious than being a housewife (ibid.). Marriage is also a factor affecting decision-making on time use. In one study, unmarried women were perceived to have greater decision-making power and control over their time because they did not have a husband to consult (Ragasa et al., 2021).

Increased commercialization can shift traditional gender relations as was the case with the introduction of hybrid rice varieties in Northern Vietnam. Ethnic minority women in the uplands of Vietnam have had a strong decision-making role in traditional rice varieties, but when hybrid varieties were introduced as part of a state-driven intensification program, ethnic women were, in effect, excluded from decision-making processes about hybrid rice production and cultivation (Bonnin and Turner, 2014). This was due to language barriers (preventing them from understanding relevant information about the new hybrid varieties) and less access to networks and new markets (ibid.). In the Democratic Republic of Congo (DRC), women and children traditionally collected fuelwood for domestic use, but when it became commercially lucrative, men got involved and now dominate 94% of collection for sale to the capital city (Ingram et al., 2014). In East Africa, women dairy farmers lost control of the income from milk sales when they started selling to chilling plants, rather than at the informal markets, as cheques were sent directly to the household head, usually the husband (Njuki and Miller, 2019).

Men increasing their participation in value chains when they become profitable is reported for various value chains and regions including aquaculture and fisheries (Kruijssen et al., 2018; O'Neill et al., 2018), livestock (Njuki et al., 2011), small-scale oil palm (Sarku, 2016) and shea (Chen, 2017; Kent, 2018), among others. In Kenya, banana was considered to be a "woman's crop" with men participating in the initial establishment of the plantations (land preparation and planting), and women doing most maintenance and harvesting. With the establishment of collective marketing groups, men's control over banana increased, partly because men were more likely to join the groups (Fischer and Qaim, 2012). As a result of male take-over, women may choose to cultivate crops with a lower market value to maintain control over crop management and income (Njiraini et al., 2018; Njuki et al., 2011). Most evidence on how gender roles and relations in agriculture change in

response to increased commercialization comes from small-scale and descriptive analyses: causal evidence from quality impact evaluations remains scarce.

In many regions women and men work together and may also make decisions jointly (Sornkliang et al., 2018). In Malawi, men attributed success in acquiring assets to working together as a family (Farnworth, 2018). A study in Malaysia found that joint decisions were made in peak seasons when workloads were high demanding that men and women work together in the fields to plant and harvest (Amran and Abdul Fatah, 2020). Unpacking the nuances of what ‘joint’ decision-making means, in practice, in different contexts, is a growing area of study (Acosta et al., 2020; Deere et al., 2013; Twyman et al., 2015).

A small number of studies look at structural constraints to decision-making. For example, in Indonesia, the gender norms of bureaucracy serve to exclude women from decision-making and distribution processes (Basnett et al., 2016). Gaining power to make decisions can be facilitated by collective bargaining and collective action, however this is not necessarily so. In some cases, cooperatives act as intermediaries that give global firms greater control over women’s labour with limited changes to women’s precarious economic situation. For example, in the argan oil sector in Morocco where pooling of labour through co-operatives keeps wages low with no/limited additional social benefits (Meagher, 2019). Likewise, a lack of market information and bargaining power, due to limited opportunities available outside agrifood systems as well as women’s preferences for seasonal and part-time work that is compatible with their care and subsistence farming responsibilities, can put women at a higher risk of exploitation (Ihalainen et al., 2021; Kawarazuka et al., 2022). Cultural norms and restrictive membership criteria, for example, requiring ownership of assets or needing to be considered head of household (Katothya, 2017; Wijers, 2019), restrict women’s participation in community groups, producer and marketing organizations. Sometimes marginalization and *de facto* exclusion of women from producer organization meetings was in part justified by men being jealous and worried their wives might look at other men (Tobin and Castellanos, 2022).

## 5. Gendered social norms

Gender norms are collectively held ideas that govern what is appropriate, acceptable behaviour for women and men in a given group or society (Cislaghi and Heise, 2018; FAO, IFAD & WFP, 2022; McDougall et al., 2021; Cislaghi et al., 2019): they change over time and are context specific (Cislaghi and Heise, 2020; FAO, IFAD & WFP, 2022; Pearse and Connell, 2016; Petesch et al., 2018). Gender norms underpin access to and control over productive resources as well as participation in, and returns from, value chain activities. They can influence and support significant sex-segmentation and discrimination in hiring practices or even be used to normalize sexual harassment (Rubin and Manfre, 2014). Essentialist perceptions of women – for example, attributions of patience, obedience, “nimble fingers”, and lack of skills and strength – are used to justify poor pay, low-skill, hazardous activities (Ihalainen et al., 2021). Value chain development can bring about shifts in gender norms, bolstering gender equality, however, when not intentionally designed to reduce gender-based constraints it may reinforce existing inequalities and serve to further exclude women (Ihalainen et al., 2021; Rubin et al., 2019).

Evidence is growing as to the harm of restrictive gender norms for value chain development. For example, where men are assumed to be primary producers, they are more likely to be approached for their products by agricultural companies (Hill and Vigneri, 2014) and have better access to support and extension services (even for tasks and crops managed by women) (Rubin and Manfre, 2014). While access to training

tends not to be overtly discriminatory towards women, organizers often fail to consider gender-specific constraints (Bamber and Staritz, 2016; Hill and Vigneri, 2014): for example, social restrictions for women interacting with male teachers, trainers or extension agents or taking transportation late at night or to faraway places (Bamber and Staritz, 2016). Time constraints due to household responsibilities limit women’s availability both for farm labour and to participate in training (Adam et al., 2021; Bamber and Staritz, 2016; Hill and Vigneri, 2014). Broader social imaginaries that fail to envision the female rancher (Flores and Torres, 2012) or woman farmer, are increasingly seen as constraints both to progress on gender equality as well as to developing more robust and lucrative value chains.

Many studies address norms related to mobility, specifically, women having limited freedom of movement and thus being restricted to activities at close proximity to home (Abdelali-Martini and Dey de Pryck, 2015; Adam et al., 2021; IFC, 2016; Shackleton et al., 2011). Women’s limited mobility is often attributed to lack of physical strength to travel long distances; lack of access to transport (Farnworth et al., 2015); safety concerns; and, discouragement from riding bicycles (Shackleton et al., 2011). One result is that women are often excluded from transporting goods to market, from marketing and sales roles (IFC, 2016), prevented from traveling to more lucrative markets and negotiating with men (Ihalainen et al., 2021), and thus unable to make necessary market contacts (Fröcklin et al., 2013). Distant, isolated production sites can also prevent women from participating in value chain activities as is the case for the collection of non-timber forest products in Burkina Faso, Ethiopia and Zambia (Shackleton et al., 2011). Social constraints on traveling alone or using motorcycles made women (in Syria) dependent on a small number of local farmers (Abdelali-Martini and Dey de Pryck, 2015).

Often linked to mobility, women combine productive work with the domestic sphere (Basnett et al., 2016; Gumucio et al., 2018; Ihalainen et al., 2021; Malapit et al., 2020; Shackleton et al., 2011). In some cases, women do so in order to preserve their gendered identities within the community, for example, in East Kalimantan women tend to prioritize rice cultivation over oil palm in order to fulfil their roles as providers of household food (Basnett et al., 2016). However, the consequence is that companies hire labour for oil palm from outside the area, rather than hiring local women (Basnett et al., 2016). In the seaweed value chain in the Philippines, women do tasks that can be scheduled around domestic work and done near the homestead (Malapit et al., 2020). Combining productive and reproductive work makes productive work a continuation of household activities (Ihalainen et al., 2021). This creates a reliance on insecure employment (ibid.) and, the increased work burden tends to be un-/under-compensated (Basnett et al., 2016). Evidence is growing that conceptualizing women’s labour as extension of household work may legitimize inequalities within a value chain.

Changes in gender norms and how they happen is a more recent topic. There is some evidence that education levels play a role in shifting restrictive gender norms (Flores and Torres, 2012) but more specifically, when it is a combination of education and age that seem to make a difference (Quisumbing et al., 2021). In Mozambique’s charcoal chain, women’s entry into male-dominated activities was possible due to an absence of rigid gender norms, partly explained by the relative novelty of the activity (Ihalainen et al., 2020). Necessity also seems to play a role in relaxing social norms, for example; poverty made it acceptable for on-farm women to do some “men’s” tasks in Nicaragua (Flores and Torres, 2012); economic need legitimized women’s engagement in fish retail in Malawi (Farnworth et al., 2015); and, in North-west Syria, the dire need for income amongst rural families allowed the social stigma against women’s work outside the home to wane, though notably the presence of a husband provided social legitimacy (Abdelali-Martini and

Dey de Pryck, 2015). Other factors that affect gender norms are rapid changes in circumstances (shocks). Migration, for example, presents challenges related to being away from family and support networks, but it can also provide opportunities where social norms and patriarchal structures that hold women back, are weakened (Said-Allsopp and Tallontire, 2015). Off-farm employment and income also play a role in strengthening women migrants' confidence and livelihoods (Said-Allsopp and Tallontire, 2015). Interestingly, in Bangladesh gender norms seem to be more elastic within a shrimp processing plant (Choudhury et al., 2017). (Section 6 will discuss this in more depth.)

Even when circumstances change, norms may remain intact. In the Syrian example, despite wage earning, women's greatest aspiration for their daughters remained traditional - that they should marry well-off men and concentrate on domestic roles (Abdelali-Martini and Dey de Pryck, 2015). Further, earning wages did not give women the power to ask for help with housework (ibid.). Likewise, in charcoal value chains in sub-Saharan Africa, being widowed played a role in women being independent producers (Ihalainen et al., 2020). In these cases, norms have not necessarily shifted, but they are applied differently to women in more precarious, vulnerable social positions.

## 6. Effective interventions to address gender gaps in agrifood value chains

### 6.1. Promoting equitable access to and control over resources

The majority of evidence on interventions to promote gender equality and women's empowerment in agricultural value chains is on capacities, access to productive and financial assets, and collective action, often in combination. Somewhat separate is evidence on promoting women's access to formal jobs. Interventions related to building capacities usually focus on technical and business skills, access to information, and building self-efficacy, often embedded within other value chain interventions. Such efforts can lead to increased women's empowerment (Ihalainen et al., 2021), in particular they: build women's confidence (e.g. Faridah Aini et al., 2017; Gurung et al., 2015); support women in taking on non-traditional roles in the chain (ActionAid, 2014; Gurung et al., 2015); and improve women's ability to negotiate, both with buyers (Faridah Aini et al., 2017) and within their households (ActionAid, 2014). When it comes to supporting female entrepreneurs, traditional business training approaches have often yielded small or no impacts on the performance of women-led enterprises, however, less traditional business training programs that incorporate soft skills and personal initiative training or gender-relevant content have been shown to improve performance among women entrepreneurs (Campos et al., 2018; McKenzie, 2021).

Interventions that focus on productive assets, often focus on labour saving technologies and equipment (Ihalainen et al., 2021). Such interventions can contribute towards empowerment by increasing women's assets (Theis et al., 2018), freeing up women's time from agricultural work (Amare and Endalew, 2016), and facilitating women's entry into new value chains (Shackleton et al., 2011).

Savings and loans groups and micro-credit are common instruments to promote access to (informal) finance. A systematic review (Duvendack and Mader, 2020) found the effects of financial inclusion interventions on women's empowerment to be positive, but relatively small. Outcomes seemed to result primarily from exposure to other components of financial inclusion interventions, such as: group interaction, improved mobility, and exposure to additional rights-related training, rather than from financial inclusion itself.

Collective action is often a vehicle used to achieve other goals such as the development of capacities and access to resources and social capital. Collective action may result in income earning opportunities, and in social benefits such as increased collaboration and friendship (Chen, 2017; Elias and Arora-Jonsson, 2017), and greater confidence and self-esteem (ActionAid, 2014). Self-help groups in India were found to

positively affect women's overall empowerment and reduce gaps in empowerment at intra-household level, but to have limited effect on entrenched social norms (Kumar et al., 2021).

For all four of these intervention areas – capacities, access to productive and financial assets, and collective action - gender equality and women's empowerment outcomes are not automatic (Donald et al., 2022; Riisgaard et al., 2010). Their success depends heavily on their design, as they may be gender-blind or fail to consider gender norms. This may result in the exclusion of women, and men's appropriation of roles in profitable value chain activities or with the mechanization of traditionally female-dominated value chains (Adégbola et al., 2013; Forsythe et al., 2016). Women may be excluded from collective action where cooperatives have a "one member per household" rule (Oduol et al., 2017; Stoian et al., 2018), which often favours the household head, and therefore limits women's access to the benefits of membership (Fischer and Qaim, 2012; Oduol et al., 2017), or, if women participate, they do not benefit as much from participation as men (Bizikova et al., 2020). Access for women to collective action and other interventions can also be limited by women's relative time poverty compared to men's (Gumucio et al., 2018; Lyon et al., 2017), or they may be limited to participation in kin-based social groups, which often bring fewer benefits (Maina et al., 2014). Apart from women being less able to benefit from producer organizations, another outcome may be that men's participation increases men's control of resources within the household (Bizikova et al., 2020). The success of interventions also depends on existing gender norms, and outcomes may be restricted to particular aspects of women's empowerment, such as participation in household decision-making, rather than women's economic empowerment (Duvendack and Mader, 2020). It is therefore important that technologies are culturally appropriate, address gender-specific barriers or constraints, and ensure that women have sufficient skills (Ihalainen et al., 2021). Further, trainings and technical assistance should be targeted at couples (rather than to men alone) (Donald et al., 2022; Lambrecht et al., 2016) and be linked to gender transformative approaches (see next section). Finally, attention is needed for heterogeneity among women as certain women may be excluded from participating in interventions, because of their socioeconomic status, ethnicity, age or other intersecting identities (Elias and Arora-Jonsson, 2017).

As women are more commonly employed in informal, low-skilled jobs, promoting women's access to formal jobs provides an opportunity for their wellbeing, as those offer better working conditions, more access to health or retirement benefits, and less vulnerability to exploitation (World Bank, 2020). Women's involvement in formal jobs is more likely in sectors that are integrated into global versus local value chains (World Bank, 2020). Policies and actions to build women's capacity to be involved in global value chains include developing human capital through the promotion of women's access to education, such as through conditional cash transfers (Muralidharan and Prakash, 2017), improving access to digital technology by expanding access to digital infrastructure and training courses on their use (Omiunu, 2019; WTO, 2018), promoting access to (formal) finance, such as by addressing legal provisions that prevent women from opening a bank account and registering their businesses, and making banking services more suitable for women entrepreneurs (Jarden and Rappoldt, 2021), enhancing women's access to trade-related information (Frohmann, 2017), and improving their access to infrastructure, such as improved transport and logistical infrastructure (World Bank, 2020).

### 6.2. Gender transformative approaches

A major change over the past decade is the increased use of gender transformative approaches (GTAs) (see e.g. Kruijssen et al., 2016). GTAs aim to transform structural barriers that reinforce gender inequality, and focus on addressing gender norms and power relations, by identifying harmful norms and replacing them through engagement of both men and women (Cole et al., 2014). Examples include tools such as theatre,

community conversations, and exercises that build women's confidence and engage men and women to discuss and examine unequal gender roles and decision-making patterns within the household (Singh et al., 2022).<sup>3</sup> Men's role in such interventions is of key importance (see e.g. Gurung et al., 2015). Role models can act as a source of inspiration for normative and attitude changes (European Commission, 2019). Most commonly, these approaches have been implemented in production settings, and less in other parts of the value chain.

GTAs may foster a range of gender outcomes, including shifts in gender attitudes and other barriers underlying gender inequalities, improvements in women's empowerment and redistribution of decision-making, roles, and assets, and contributions to other development outcomes (such as nutrition and health) (McDougall et al., 2021). However, norms are notoriously difficult and slow to change (Kumar et al., 2021) and GTAs carry a significant risk of resistance and backlash. Backlash ranges from men being ridiculed if they do "women's work" in the household (Choudhury et al., 2017) to gender-based violence (Malapit et al., 2020). There is still a gap in empirical evidence regarding the effectiveness and outcomes of gender transformative approaches (McDougall et al., 2021). Recent advancements have been made in measures of women's empowerment in value chains (Twyman and Ambler, 2021), including the Project-Level Women's Empowerment in Agriculture Index for Market Inclusion (pro-WEAI + MI) (Malapit et al., 2023), the GALS methodology for value chains (Mayoux, 2012), and the gender-responsive LINK methodology (Gumucio, 2016). However, the vast majority of studies still relate to diagnostics, rather than an analysis of the effectiveness of actions being implemented (LEAD, 2021).

### 6.3. Conducive policies and governance

Gender equality and women's empowerment in value chains can be promoted by policies and by public and private governance mechanisms that create an "enabling environment". For gender equity, the international instruments for responsible business conduct are of interest, such as the UN Guiding Principles on Business and Human Rights (UNGPs) (United Nations Human Rights Council UNHRC, 2011), and the OECD Due Diligence Guidance for Responsible Business Conduct (OECD, 2018). Yet, it appears that companies may not perceive sexual violence as a systemic risk to include in human rights due diligence, partly due to how it is included in these two instruments, and a lack of guidance on how to identify and address it (Tobalagba, 2020). Potentially the UNHRC document on gender dimensions of the UNGPs (United Nations Human Rights Council UNHRC, 2019) and the guidance note on integrating gender dimensions into supply chain due diligence (OECD, 2018) could overcome this challenge, however as these are fairly recent, there is not yet any evidence on their effect. Another international policy instrument is preferential trade agreements (PTAs). According to a World Bank study (2020) eighty PTAs refer explicitly to women and issues related to gender equality, but they vary greatly in terms of structure and scope. There is also limited evidence on the effectiveness of PTAs in advancing women's economic empowerment (World Bank, 2020).

National laws and regulations may also promote (or hinder) gender equality; a phenomenon studied in relation to land rights, in particular. National laws and regulations promoting gender equality have been found to have positive effects on women's inheritance of land, their involvement in household decision-making, and increases in marriage age and educational attainment (Higgins et al., 2018). However,

<sup>3</sup> Examples of GTAs include Gender Action Learning System (GALS) (Oxfam Novib, IFAD, Hivos, Twin and Twin Trading), Gender Household Approach (Hanns R. Neumann Stiftung), Journeys of Transformation (Promundo), and Nurturing Connections (Helen Keller International) Community Conversations (World Food Programme), and Farmers' Field and Business Schools (FFBS) (CARE) (FAO, IFAD & WFP, 2022).

gender-blind land tenure interventions carry the risk of perpetuating inherent gender discrimination (Rakoljane, 2013; Yami and Snyder, 2016) and female-headed households that increased tenure security over land, faced capacity issues and social barriers to convert this into improved livelihood outcomes (Higgins et al., 2018). This underscores the importance of linking policy interventions with interventions that address gender norms.

Apart from doing due diligence on suppliers, so-called 'lead firms' in global value chains (often Northern buyers) also directly determine the working conditions for producers and processors (Humphrey and Schmitz, 2001) by putting pressure on suppliers to reduce costs and increase efficiency, simultaneously requiring them to meet stringent quality standards (Barrientos, 2013; ILO, 2017; Oxfam, 2018). Because women workers tend to undertake informal work under poor conditions (Kruijssen et al., 2018) they are likely to be most affected by such pressure. This means that lead firms can play an active role in addressing gender inequality. In recent years, under pressure by non-governmental organizations (NGOs) (e.g. Oxfam Novib<sup>4</sup>), retailers have begun issuing statements with regard to gender policies for their supply chains. A study of gender initiatives of ten (multinational) member companies (retailers and brands) of the UK Ethical Trading Initiative found that advances have been made over the past ten years in terms of companies' awareness and approaches towards women workers in their value chains, however it also found that these initiatives were difficult to scale up (Barrientos et al., 2019).

Private governance includes the use of voluntary standards (labour codes and auditing), which are sometimes criticized for their inability to address gender inequalities (e.g. Barrientos et al., 2003; Pearson, 2007). Research in the Kenyan tea sector found that although some standard setting bodies had addressed earlier critiques, such as how informal and reproductive work are included, standards still had a limited effect on local gendered divisions of labour, mostly due to deeply entrenched gender norms (Loconto, 2015). Certification has sometimes been found to have an adverse effect on women's workload without an even distribution of benefits, and limited effects on gender pay gaps (Oya et al., 2018). Positive effects of certification on women producers include: increased decision-making power and control over production activities and income (Chiputwa and Qaim, 2016), enhanced access for women to new knowledge, management of production processes, participation in capacity-building, increased dignity and pride from increased recognition from household and communities (Verhart and Pyburn, 2010), and changes in norms around the social unacceptability of women handling cash (Lyon et al., 2010). However, there is a risk that certain women are excluded from participating in certification programs (Ihalainen et al., 2021).

To expose gender inequality and gender-based violence in value chains that happen outside immediate company premises, effective grievance mechanisms for individuals and communities (as opposed to those for workers) are needed, but are often absent in agribusinesses (Kimotho and Ogol, 2021). External actors, such as NGOs and civil society organizations, can put in place such grievance mechanisms (Barrientos et al., 2019). Women's rights organizations could also play a role in putting grievance mechanisms in place however, thus far, have not been actively engaged in labour rights issues in global value (Barrientos et al., 2019).

## 7. Conclusions

The past 10 years have seen important advances in how gender dynamics in value chains are considered in research. A first and important change is that focus is no longer on 'making the case' for women's participation in value chains or for gender analysis: the question has

<sup>4</sup> <https://views-voices.oxfam.org.uk/2020/06/which-supermarkets-are-doing-the-most-to-protect-the-rights-of-food-workers/>.

shifted from 'why' to 'how'. In value chain research and development there is increasing recognition that gender equality is about addressing power imbalances in gender relations rather than 'fixing' women. In addition, intersectional dimensions of gender equality have come into focus, and these are increasingly included in analyses. This takes gender analysis beyond a non-existent universal woman towards a more nuanced power analysis that looks at other social and economic markers affecting people's lives. In short, gender analysis is not *just* about women, and not about *all* women as an undifferentiated category. An intersectional analysis distinguishes heterogeneous actors within value chain segments (or nodes) and across them (Stoian et al., 2018). Nonetheless, more intersectional research is needed, as is the collection of intersectional data, quantitative in particular.

Another positive development is increased, critical examination of gender inequality in the context of the commercialization of agriculture. Women's entry into higher return value chains, value chain nodes, and value chain activities - for example, as entrepreneurs in small-scale agriculture, workers in globalized value chains and in agri-businesses - may create tensions with their domestic and reproductive responsibilities and related locally manifesting gender norms. Engagement in commercial value chains as either employees or entrepreneurs can also bring additional stressors for women, which can contribute to their disempowerment, but this has received less attention in data and studies.

Many interventions that were promoted to increase gender equality a decade ago remain relevant for both self-employment and in formal jobs, such as promoting access to and control over resources. Such interventions include: building women's skills and capacities, potentially in groups, to promote decision-making power over resources; promoting women's access to finance in groups (or individually) to support women's empowerment; promoting collective action among women to build capacities and enhance agency; and, promoting women's access to formal jobs through building human capital, access to digital technology, access to finance, access to trade-related information, and improving access to infrastructure. However, increasingly clear is that such efforts will have limited success if gender norms are not addressed, which entails working with women and men (Lecoutere et al., 2023). Promising approaches to working with both women and men in value chains are already available (Donald et al., 2022; Lecoutere et al., 2023; McDougall et al., 2021), but need to be monitored and evaluated to assess impact and efficacy. Sensitivity to potential backlash is critical and tools to specifically examine changes in norms must be developed.

Recognition is growing as to the interplay between empowering and disempowering outcomes, which can happen in the same intervention, sometimes simultaneously (Ihalainen et al., 2021). For example, increased work burden, and limited control over land or production decisions can happen at the same time as greater participation in a value chain or increased income. Participation does not equate with empowerment.

The complexity of empowerment and gender equality - as multi-dimensional and multi-level concepts - is becoming better understood, articulated, and examined over time. This has been greatly facilitated by the growth of rigorous qualitative and quantitative analytical and data collections methods over the last decade (Quisumbing et al., 2023; Twyman and Ambler, 2021). Nonetheless, some aspects - especially individual and material ones - have had a lot of attention, including in value chain research and development. Others - relational and systemic levels as well as informal and ideational aspects are less studied and less well understood (Pyburn and van Eerdewijk, 2021). Collective agency, systemic and relations levels of gender equality and women's empowerment, and the tension between engagement with local norms and global institutions all still require attention (Pyburn and van Eerdewijk, 2021).

With regard to value chain development, there is now more explicit questioning of the limits and characteristics of gender equality efforts; this is a market mechanism that involves plugging into economic

systems that tend to exploit (women and others); and that value chain development may be an avenue for women's *economic* empowerment but does not necessarily affect other dimensions of empowerment. At the same time, it is clear that value chain research and development initiatives have shifted to include a focus on restrictive gender norms rather than just the gender division of labour.

This review highlights that gender inequalities remain significant in value chains. Barriers are both formal and informal and play out at individual and systemic levels. These barriers limit women's opportunities for equal participation in different value chain nodes, and limit the potential returns women can generate. The patterns of gender inequalities vary by the type and node of the value chain, and the context in which they are embedded. While there is more attention to gender dimensions and women's participation in value chain nodes beyond production than in the past, the majority of agrifood chain research continues to focus on this node (Pyburn and Kruijssen, 2020). Inequalities are aggravated at the intersection of gender and other social characteristics including class, ethnicity, indigenous status, and migration, among others. However, despite more suitable measurement methods being available (e.g. pro-WEAI + MI), national statistical systems still need to better capture gendered patterns of work and working conditions across agrifood systems and monitor these over time. Beyond production node, national surveys continue to provide limited insights about gendered patterns of participation and benefits in different value chains and different nodes such as processing, trade, and transport.

In general, robust, national and multi-country data on gender relations beyond the primary agricultural sector is scarce. This hinders the ability to track changes in gender relations and inclusivity in value chains over time and across contexts. We are still unable to derive where women and men, in particular those from socially and economically marginalized backgrounds, are in agrifood systems, the conditions of their engagement, and whether these have been changing in positive or negative ways over the last decade. Improved methods must therefore be integrated into national surveys. The data need to be reliable, accessible, and comparable across contexts and time, in particular for agrifood value chains. Ideally, this data would be disaggregated for other key social markers relevant for a particular context, in addition to sex.

There is increasing evidence on interventions to address gender inequalities. Apart from more empirical evidence on the impact of interventions that improve access to (all types of) resources, there is also more knowledge about how such interventions need to be implemented. For example, women's roles in value chains, including in informal sectors, must not go unrecognized and extension support and training must not be restricted to export commodity value chains, which inadvertently benefit men more than women, and explicitly ensure that women are able to participate (Hicks et al., 2022; HLPE, 2023). Where wage employment opportunities for women are promoted, they must be decent jobs with contracts, fair and equal remuneration for equal work, and access to social protection and other benefits, and in an environment where women are safe from harassment and gender-based violence. To address unfavourable gender and social norms that restrict women's opportunities, contributions and benefits, gender transformative approaches are of particular importance, and, while empirical evidence is still limited, the evidence that is available has found they contribute to gender equality and women's empowerment as well as to improved value chain performance. Such approaches need to engage with men - as husbands, fathers, and brothers; community chiefs; regional leaders and ministers.

Finally, companies have a role to play in ensuring their value chains do not contribute to gender inequality, through the use of international instruments for responsible business conduct, and gender specific supporting materials that have become available. However, evidence will need to be collected on how and to what degree they do. Voluntary standard systems can support this, however, would need guidance to improve on current efforts to incorporate gender.



## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

No data was used for the research described in the article.

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