



Women in Agricultural Value Chains:  
Data from 9 African Countries

T.S. Jayne and Felix K. Yeboah

# Data and Analytical Approach

- Nationally representative multi-year household data
  - LSMS-ISA (Ghana, Nigeria, Rwanda, Tanzania, Uganda)
  - Labor force surveys (Zambia)
  - Census Data from IPUMS/Minnesota Population Center (Kenya, Malawi, Mali)
- Sectoral employment “stocks” and “flows” in three employment groups
  - Farming
  - Off-farm segment of agri-food system
  - Non-farm sector (outside agri-food system)





Table 5. Mean age of individuals engaged in farming

Country	Survey years	Individuals aged 15 years or more engaged in farming			Individuals aged 15 years or more with at least 50% FTE in farming			Individuals aged 25 years or more with at least 50% FTE in farming		
		Total	Males	Females	Total	Males	Females	Total	Males	Females
Ghana	2005/06	<b>40</b>	40	40	<b>40</b>	40	40	<b>44</b>	44	43
	2012/13	<b>39</b>	38	39	<b>42</b>	42	41	<b>45</b>	46	44
Nigeria	2003/04	<b>43</b>	44	41	<b>43</b>	44	42	<b>46</b>	47	45
	2012/13	<b>42</b>	42	42	<b>43</b>	44	42	<b>48</b>	49	46
Rwanda	2005/06	<b>35</b>	35	35	<b>35</b>	35	35	<b>42</b>	42	42
	2010/11	<b>37</b>	36	38	<b>37</b>	37	38	<b>42</b>	42	42
Tanzania	2008/09	<b>39</b>	39	38	<b>39</b>	39	39	<b>44</b>	44	44
	2014/15	<b>36</b>	35	36	<b>36</b>	36	37	<b>44</b>	45	44
Uganda	2005/06	<b>34</b>	34	34	<b>34</b>	35	34	<b>41</b>	41	40
	2011/12	<b>34</b>	34	35	<b>35</b>	34	36	<b>41</b>	41	42
Zambia	2005	<b>33</b>	33	34	<b>34</b>	34	33	<b>42</b>	42	41
	2012	<b>35</b>	37	34	<b>36</b>	38	35	<b>42</b>	42	41
Kenya~	1999	<b>35</b>	35	35	-	-	-	-	-	-
	2009	<b>37</b>	38	37	-	-	-	-	-	-
Malawi~	1998	<b>37</b>	38	36	-	-	-	-	-	-
	2008	<b>37</b>	37	37	-	-	-	-	-	-
Mali~	1998	<b>35</b>	36	33	-	-	-	-	-	-
	2009	<b>35</b>	36	33	-	-	-	-	-	-

**Table 1. Sectoral Employment Shares for 15-35 Year Age Category from Most Recent Nationally Representative Survey**

		Total working age population between 15-35 years (millions)		% of working age population between 15-35 years engaged in									
				Farming		Off-farm stages of agri-food system		Non-farm outside agri-food system		Economically inactive		Unemployed	
		15-24	25-35	15-24	25-35	15-24	25-35	15-24	25-35	15-24	25-35	15-24	25-35
Ghana (2012/13)	<b>Total</b>	<b>5.0</b>	<b>3.6</b>	<b>32.7</b>	<b>30.6</b>	<b>9.6</b>	<b>15.6</b>	<b>17.9</b>	<b>44.5</b>	<b>36.8</b>	<b>6.6</b>	<b>3.0</b>	<b>2.6</b>
	Males	2.4	1.6	38.5	32.0	5.2	5.5	18.6	56.1	35.3	4.5	2.4	1.9
	Females	2.6	2.0	27.4	29.4	13.7	24.3	17.2	34.6	38.1	8.5	3.5	3.2
Nigeria (2012/13)	<b>Total</b>	<b>31.2</b>	<b>20.6</b>	<b>21.4</b>	<b>23.5</b>	<b>5.1</b>	<b>16.6</b>	<b>8.5</b>	<b>30.3</b>	<b>62.7</b>	<b>25.7</b>	<b>2.3</b>	<b>3.8</b>
	Males	16.6	8.1	28.1	31.0	3.6	9.3	7.7	35.9	58.3	18.6	2.3	5.3
	Females	14.6	12.4	13.7	18.4	6.9	21.6	9.5	26.5	67.7	30.7	2.2	2.8
Rwanda (2010/11)	<b>Total</b>	<b>2.3</b>	<b>1.5</b>	<b>47.0</b>	<b>62.7</b>	<b>5.0</b>	<b>7.6</b>	<b>20.1</b>	<b>27.4</b>	<b>27.2</b>	<b>1.7</b>	<b>0.7</b>	<b>0.6</b>
	Males	1.1	0.7	42.6	53.7	5.6	8.1	24.1	36.2	27.1	1.6	0.6	0.4
	Females	1.2	0.8	51.2	71.7	4.5	7.2	16.2	18.5	27.4	1.8	0.7	0.8
Tanzania (2011/12)	<b>Total</b>	<b>9.5</b>	<b>5.8</b>	<b>51.9</b>	<b>46.1</b>	<b>7.0</b>	<b>16.3</b>	<b>15.6</b>	<b>29.6</b>	<b>22.5</b>	<b>6.1</b>	<b>2.9</b>	<b>1.8</b>
	Males	4.7	2.7	54.1	41.5	6.4	14.6	17.5	40.5	19.3	2.6	2.7	0.8
	Females	4.8	3.1	49.7	50.1	7.7	17.9	13.8	20.1	25.7	9.2	3.1	2.7
Uganda (2011/12)	<b>Total</b>	<b>7.2</b>	<b>3.8</b>	<b>48.7</b>	<b>49.2</b>	<b>3.0</b>	<b>9.2</b>	<b>10.5</b>	<b>24.5</b>	<b>37.4</b>	<b>16.7</b>	<b>0.5</b>	<b>0.4</b>
	Males	3.8	1.7	50.0	42.4	3.1	9.2	13.7	35.8	32.8	12.4	0.5	0.2
	Females	3.4	2.0	47.5	55.0	3.0	9.2	7.6	14.9	41.6	20.3	0.4	0.6
Zambia (2012)	<b>Total</b>	<b>3.1</b>	<b>2.0</b>	<b>29.6</b>	<b>43.2</b>	<b>2.7</b>	<b>7.7</b>	<b>12.6</b>	<b>35.4</b>	<b>48.2</b>	<b>7.0</b>	<b>7.0</b>	<b>6.8</b>
	Males	1.5	0.9	25.1	39.8	2.6	6.6	12.8	43.2	53.7	5.0	5.9	5.4
	Females	1.6	1.0	33.8	46.2	2.8	8.6	12.5	28.5	43.0	8.8	8.0	8.0

**Table 1. Sectoral Employment Shares for 15-35 Year Age Category from Most Recent Nationally Representative Survey**

		Total working age population between 15-35 years (millions)		% of working age population between 15-35 years engaged in									
				Farming		Off-farm stages of agri-food system		Non-farm outside agri-food system		Economically inactive		Unemployed	
		15-24	25-35	15-24	25-35	15-24	25-35	15-24	25-35	15-24	25-35	15-24	25-35
Ghana (2012/13)	<b>Total</b>	<b>5.0</b>	<b>3.6</b>	<b>32.7</b>	<b>30.6</b>	<b>9.6</b>	<b>15.6</b>	<b>17.9</b>	<b>44.5</b>	<b>36.8</b>	<b>6.6</b>	<b>3.0</b>	<b>2.6</b>
	Males	2.4	1.6	38.5	32.0	5.2	5.5	18.6	56.1	35.3	4.5	2.4	1.9
	Females	2.6	2.0	27.4	29.4	13.7	24.3	17.2	34.6	38.1	8.5	3.5	3.2
Nigeria (2012/13)	<b>Total</b>	<b>31.2</b>	<b>20.6</b>	<b>21.4</b>	<b>23.5</b>	<b>5.1</b>	<b>16.6</b>	<b>8.5</b>	<b>30.3</b>	<b>62.7</b>	<b>25.7</b>	<b>2.3</b>	<b>3.8</b>
	Males	16.6	8.1	28.1	31.0	3.6	9.3	7.7	35.9	58.3	18.6	2.3	5.3
	Females	14.6	12.4	13.7	18.4	6.9	21.6	9.5	26.5	67.7	30.7	2.2	2.8
Rwanda (2010/11)	<b>Total</b>	<b>2.3</b>	<b>1.5</b>	<b>47.0</b>	<b>62.7</b>	<b>5.0</b>	<b>7.6</b>	<b>20.1</b>	<b>27.4</b>	<b>27.2</b>	<b>1.7</b>	<b>0.7</b>	<b>0.6</b>
	Males	1.1	0.7	42.6	53.7	5.6	8.1	24.1	36.2	27.1	1.6	0.6	0.4
	Females	1.2	0.8	51.2	71.7	4.5	7.2	16.2	18.5	27.4	1.8	0.7	0.8
Tanzania (2011/12)	<b>Total</b>	<b>9.5</b>	<b>5.8</b>	<b>51.9</b>	<b>46.1</b>	<b>7.0</b>	<b>16.3</b>	<b>15.6</b>	<b>29.6</b>	<b>22.5</b>	<b>6.1</b>	<b>2.9</b>	<b>1.8</b>
	Males	4.7	2.7	54.1	41.5	6.4	14.6	17.5	40.5	19.3	2.6	2.7	0.8
	Females	4.8	3.1	49.7	50.1	7.7	17.9	13.8	20.1	25.7	9.2	3.1	2.7
Uganda (2011/12)	<b>Total</b>	<b>7.2</b>	<b>3.8</b>	<b>48.7</b>	<b>49.2</b>	<b>3.0</b>	<b>9.2</b>	<b>10.5</b>	<b>24.5</b>	<b>37.4</b>	<b>16.7</b>	<b>0.5</b>	<b>0.4</b>
	Males	3.8	1.7	50.0	42.4	3.1	9.2	13.7	35.8	32.8	12.4	0.5	0.2
	Females	3.4	2.0	47.5	55.0	3.0	9.2	7.6	14.9	41.6	20.3	0.4	0.6
Zambia (2012)	<b>Total</b>	<b>3.1</b>	<b>2.0</b>	<b>29.6</b>	<b>43.2</b>	<b>2.7</b>	<b>7.7</b>	<b>12.6</b>	<b>35.4</b>	<b>48.2</b>	<b>7.0</b>	<b>7.0</b>	<b>6.8</b>
	Males	1.5	0.9	25.1	39.8	2.6	6.6	12.8	43.2	53.7	5.0	5.9	5.4
	Females	1.6	1.0	33.8	46.2	2.8	8.6	12.5	28.5	43.0	8.8	8.0	8.0

# MAJORITY OF OFF-FARM AGRI-FOOD SYSTEM JOBS IN COMMERCE, MUCH LESS IN AGRO-PROCESSING

Country	Survey years	Farming	Agro-processing	Downstream commerce and distribution	Non-farm
		% of FTE jobs	% of FTE jobs	% of FTE jobs	% of FTE jobs
Ghana	2005/06	43.5	<b>6.3</b>	<b>8.6</b>	41.6
	2012/13	34.3	<b>3.7</b>	<b>15.5</b>	46.5
Nigeria	2010/11	30.6	<b>2.3</b>	<b>18.7</b>	48.2
	2012/13	33.7	<b>4.6</b>	<b>18.6</b>	43.1
Rwanda	2005/06	65.7	<b>0.4</b>	<b>7.4</b>	26.6
	2010/11	54.0	<b>1.2</b>	<b>7.7</b>	37.0
Tanzania	2010/11	47.3	<b>2.5</b>	<b>15.0</b>	35.2
	2012/13	48.3	<b>1.6</b>	<b>15.6</b>	34.5
Uganda	2005/06	57.0	<b>2.8</b>	<b>10.2</b>	30.0
	2011/12	48.6	<b>1.7</b>	<b>12.0</b>	37.7
Zambia	2005	61.2	<b>1.6</b>	<b>3.1</b>	34.1
	2012	46.7	<b>2.1</b>	<b>7.1</b>	44.1

Source: Yeboah and Jayne (2018)

What about youth 15-24 years of age working in ag value chains?





# Conclusions

1. Most rural African women work in farming
  - Regional variations: greater % of women in value chains in W. Africa / fewer in E/S Africa
2. Women's employment in agricultural value chains is rising
3. Within value chains: most women in retailing / distribution / preparing foods away from home – much fewer in agro-processing
4. Jobs for women in ag value chains often growing most rapidly in rural areas, not urban
5. Age of men and women in farming is not rising



Danke

	# of people in working age population (weighted #s)			Annual % change in # of working age population in age categories				
	2008/09	2012/13	Annual % change	15-24	25-34	35-44	45-54	55-64
<b>Urban</b>								
Farming								
Male	218,545	329,400	12.7	7.9	23.1	2.4	15.4	21.9
Female	389,950	519,750	8.3	2.5	9.3	-4.0	31.4	11.4
Off-farm within agri-food system								
Male	130,011	208,063	15.0	19.0	8.5	40.5	3.7	-8.8
Female	208,048	331,893	14.9	8.2	16.5	10.4	26.2	150.7
Off-farm outside agri-food system								
Male	1,113,785	1,870,715	17.0	39.6	13.1	17.4	8.4	11.0
Female	729,846	1,182,237	15.5	22.9	8.9	23.1	17.0	4.4
Unemployed								
Male	107,111	320,087	49.7	40.8	52.1	140.1	684.6	16.9
Female	181,883	498,547	43.5	33.2	43.6	70.0	76.9	379.6
Economically inactive								
Male	696,504	699,740	0.1	0.2	-1.4	5.0	-3.4	2.7
Female	1,105,701	1,376,885	6.1	6.8	4.5	11.4	1.3	2.8
Total # urban individuals in working-age	5,105,038	7,504,586	11.8	10.4	11.5	14.6	13.7	10.4
Total # of males	2,362,614	3,516,672	12.2	10.9	13.0	15.6	9.9	11.0
Total # of females	2,742,425	3,987,914	11.4	10.0	10.4	13.7	17.7	9.7
<b>Rural</b>								
Farming								
Male	4,118,699	4,212,582	0.6	6.4	-1.2	-4.4	1.0	-0.6
Female	5,138,233	5,110,558	-0.1	0.0	-1.9	0.3	2.3	-0.6
Off-farm within agri-food system								
Male	102,983	186,039	20.2	71.0	-2.5	39.0	74.5	-24.4
Female	71,336	139,819	24.0	41.4	9.8	48.2	905.0	-17.7
Off-farm outside agri-food system								
Male	804,598	1,567,402	23.7	69.1	13.0	11.6	14.9	16.0
Female	282,327	625,759	30.4	96.8	13.3	14.8	3.3	27.4
Unemployed								
Male	56,457	501,130	196.9	172.6	122.7	231.2	-	-
Female	33,815	625,858	437.7	421.9	410.7	442.6	366.4	1751.6
Economically inactive								
Male	1,314,424	1,368,957	1.0	-2.5	24.0	13.6	2.5	16.3
Female	1,457,161	1,733,897	4.7	2.1	13.0	8.7	13.8	7.5
Total # of rural individuals in working-age	13,912,338	16,608,472	4.8	7.0	3.6	2.9	4.6	3.2
Total # of males	6,730,073	8,101,169	5.1	7.8	4.0	1.6	4.1	4.3
Total # of females	7,182,265	8,507,303	4.6	6.2	3.2	4.1	5.1	2.2
<b>Totals</b>								
Total in working age population	19,017,377	24,113,058	6.7	7.9	6.1	5.9	6.5	4.7
Total # of males	9,092,687	11,617,840	6.9	8.6	6.7	5.3	5.4	5.7
Total # of females	9,924,690	12,495,217	6.5	7.3	5.5	6.4	7.7	3.8

Color scheme    **Negative**    red    0.1-10.    yellow    10.1-20.    green    above 20    blue

## A2. 4. Changes in Primary Employment of Working-age Population by Sector, Ghana

	# of people in working age population (weighted #s)			Annual % change in # of working age individuals in age categories				
	2005	2013	Annual % change	15-24	25-34	35-44	45-54	55-64
<b>Urban</b>								
Farming	515,019	925,412	15.9					
Male	289,946	511,172	15.3	46.1	5.7	8.5	7.1	16.4
Female	225,073	414,240	16.8	43.2	20.2	14.9	1.6	16.3
Off-farm within agri-food system	575,020	1,437,666	30.0					
Male	115,038	206,759	15.9	52.2	8.8	4.0	12.1	19.4
Female	459,982	1,230,907	33.5	37.7	34.9	35.4	25.6	37.5
Off-farm outside agri-food system	2,042,250	3,388,598	13.2					
Male	1,138,686	1,988,885	14.9	17.3	17.6	13.8	11.5	11.8
Female	903,564	1,399,713	11.0	13.8	14.5	6.3	7.3	12.6
Unemployed	415,161	265,133	-7.2					
Male	194,137	101,702	-9.5	-8.9	-9.9	-10.4	-10.4	-10.8
Female	221,024	163,431	-5.2	-4.8	-5.7	-4.1	-5.7	-11.9
Economically inactive	1,664,341	1,784,988	1.4					
Male	717,400	732,898	0.4	0.7	-2.3	-10.5	-3.8	15.2
Female	946,941	1,052,090	2.2	3.2	-1.0	-1.9	3.1	3.4
Total # urban individuals in working-age	5,227,644	7,846,306	10.0	7.2	12.0	12.0	9.6	13.2
Total # of males	2,467,381	3,565,112	8.9	6.3	11.0	10.2	8.6	12.1
Total # of females	2,760,263	4,281,194	11.0	8.1	12.8	13.6	10.5	14.2
<b>Rural</b>								
Farming	4,010,854	4,211,265	1.0					
Male	2,036,735	2,130,157	0.9	9.1	-3.2	-1.5	-2.0	1.5
Female	1,974,119	2,081,108	1.1	9.1	-2.2	0.2	-1.7	1.4
Off-farm within agri-food system	520,484	641,670	4.7					
Male	66,653	88,918	6.7	22.2	0.5	2.4	9.9	-2.2
Female	453,831	552,753	4.4	14.1	1.0	3.8	-0.9	14.8
Off-farm outside agri-food system	890,636	1,095,388	4.6					
Male	468,221	658,394	8.1	13.0	12.0	10.6	-0.1	-4.5
Female	422,416	436,994	0.7	8.2	0.2	-5.3	-3.0	3.0
Unemployed	106,422	76,499	-5.6					
Male	37,179	22,307	-8.0	-8.1	-4.3	-16.2	-11.8	6.5
Female	69,243	54,192	-4.3	-7.1	-0.9	-6.5	31.7	-8.4