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RESEARCH CONFERENCE

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DIVISION OF WOMEN'S LABOR ACROSS PRODUCTIVE AND REPRODUCTIVE ACTIVITIES (TIME-USE) AND EFFECT ON HOUSEHOLD DIET DIVERSITY – A CASE FOR GENDER SENSITIVE SOCIAL SAFETY NETS

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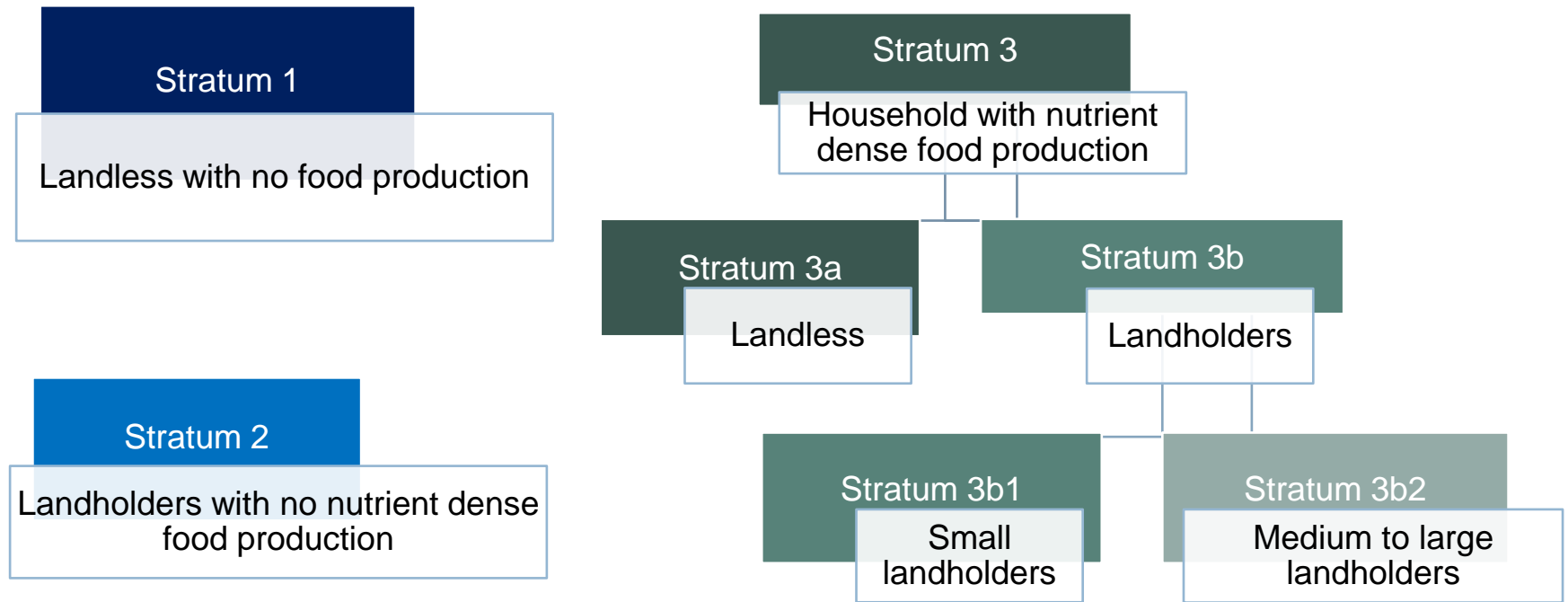
CONSUMPTION AND PRODUCTION SURVEY WITH A MODULAR TIME-USE SURVEY

- Mixed method study in two districts of Bihar – Gaya and Nalanda
- 1012 and 1014 households with children <5years of age were surveyed from Gaya and Nalanda respectively – Total – 2026
- Random sample of villages, at set distances (5, 10, 15, 30 KM) from the district headquarters, accounting for proximity to urban centres and access to markets
- Round 1 July-Sept 2019 – Kharif Season
 - Data on consumption (Quantity, Purchased/ own produce)
 - Expenditure on purchase,
 - Markets accessed



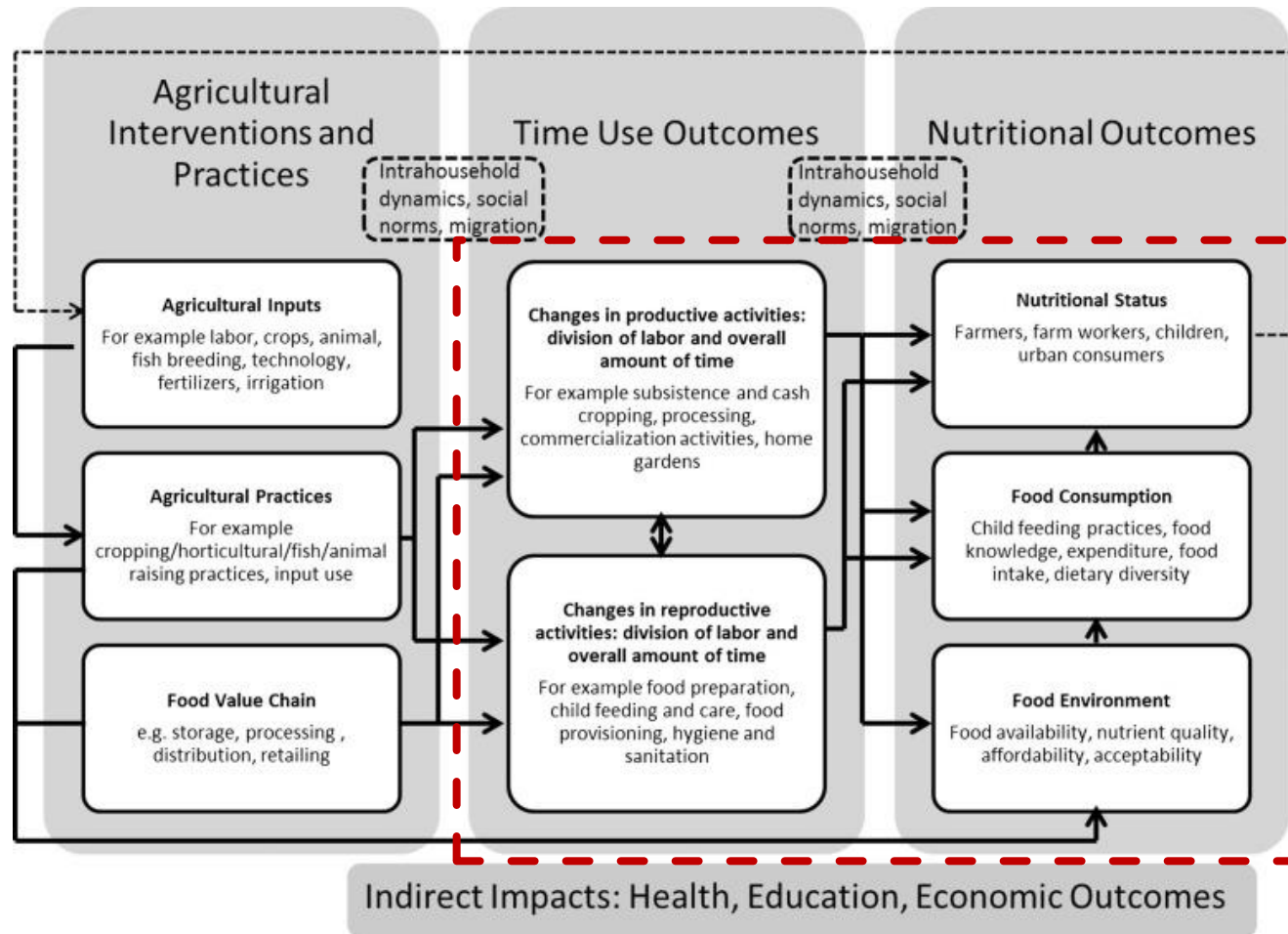
STRATA FOR SAMPLING

The sampling of households (10 within a village) was stratified among the following five categories



Nutrient dense foods included: Pulses, Milk, Egg, Chicken & GLV

WOMEN'S TIME-USE AND IMPACT ON HOUSEHOLD DIET DIVERSITY SCORE – FOOD ACCESS & QUALITY



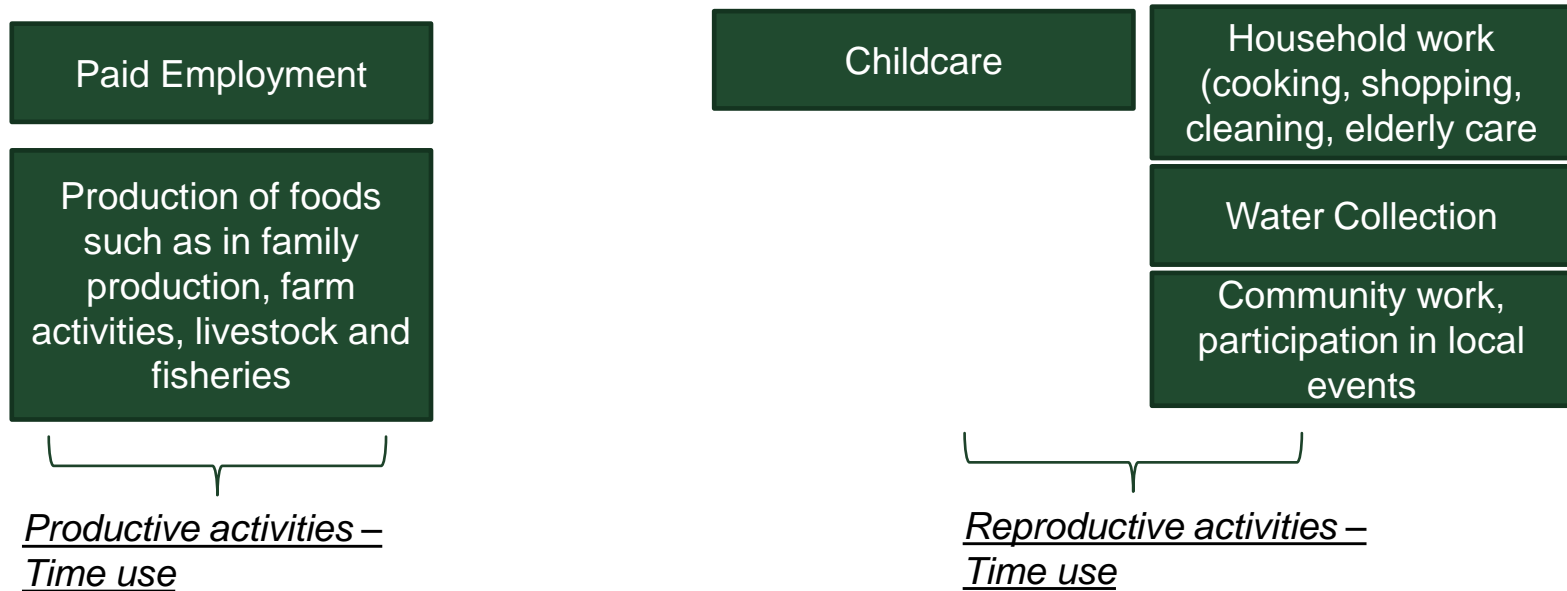
HOUSEHOLD DIET DIVERSITY SCORE

Recall Period – 7 days	Food Groups
1	Cereals
2	Roots & tubers
3	Vegetables (Green leafy vegetables and other vegetables, excluding roots and tuber)
4	Fruits
5	Meat, poultry and offal
6	Eggs
7	Fish and seafood
8	Pulses, legumes and nuts
9	Milk and milk products
10	Oils/Fats
11	Sugar/honey
12	Miscellaneous (Beverages & Other Foods)

Source: (Eric O. Verger, Terri J. Ballard, Marie Claude Dop, 2019), Leroy et al., 2015b

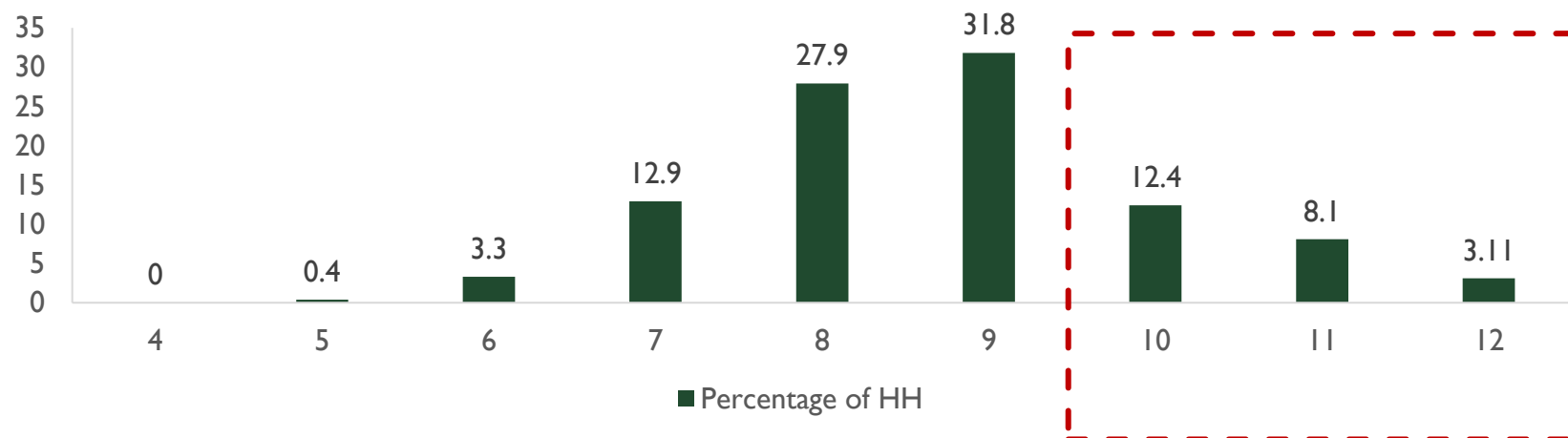
WOMEN'S TIME-USE AND IMPACT ON HOUSEHOLD DIET DIVERSITY SCORE

- A modular standardized time-use survey (International Labour Organization and United Nations Development Programme, 2018)
- Time allocation across a range of activities on an average day by mothers, who had children aged less than 5 years



HOUSEHOLD DIET DIVERSITY SCORE DISTRIBUTION

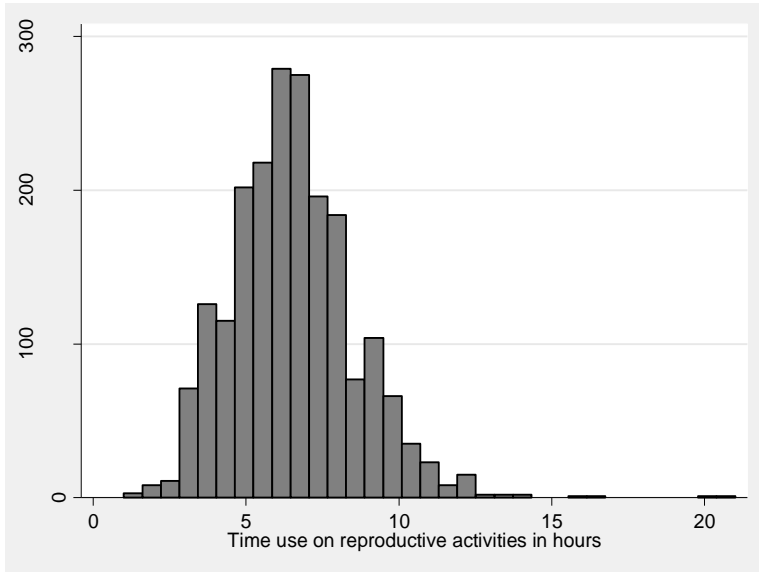
Household Diet Diversity Score across Household



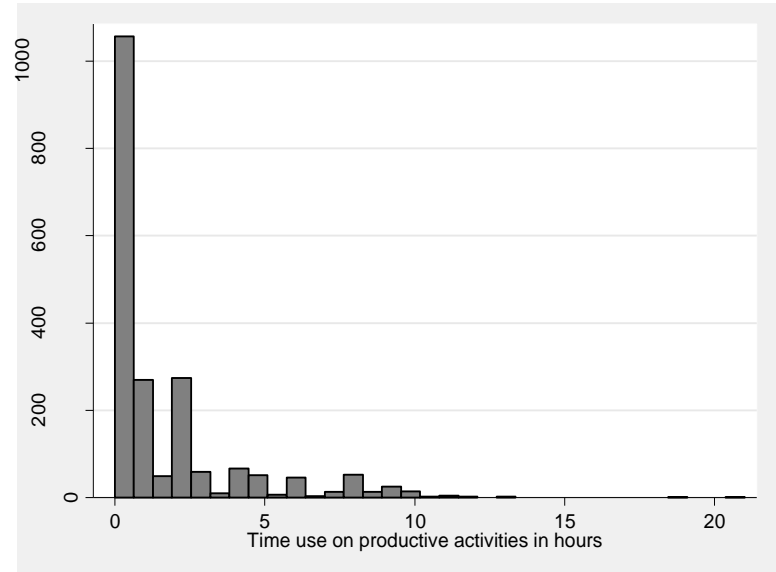
N= 2024 Households

- ❖ Average HDDS was 9 (SD=1.3) and the HDDS score ranged from 5 to 12
- ❖ Good diet diversity (HDDS \geq 10) was reported by 24% of the households.
- ❖ Lower than optimal HDDS was mainly due to the non-consumption of fish/seafood (96%), eggs (86%) and meat & poultry (40%).

TIME-USE DISTRIBUTION REPRODUCTIVE AND PRODUCTIVE TIME-USE



No. of non-zero response for reprod_timeuse:
2024,
Median: 380 minutes/day (Q1:310 minutes,
Q3:480 minutes)



No. of non-zero response for prod_timeuse:
1037
Median: 20 minutes/day (Q1:0 minutes,
Q3:120 minutes)

TIME-USE – REPRODUCTIVE & PRODUCTIVE

	N	Median(Quartile1, Quartile3)
Productive Time-use (in minutes)	2024	20 (0,120)
Reproductive Time-use (in minutes)	2024	380 (310,480)
	-	<u>Mean; Median (Q1:Q3)</u>
Productive Time-use (in minutes)	2024	
<i>Paid work</i>		46; 0 (0,0)
<i>Production of Food</i>		49; 0 (0,60)
Reproductive Time-use (in minutes)	2024	
<i>Water Collection</i>		18; 5 (0, 20)
Household Chores		184; 180 (120, 240)
Childcare		172; 150 (120, 240)
<i>Community-Unpaid work</i>		18; 0 (0, 20)

- Association of HDDS with productive and reproductive time-use was examined **using separate Poisson Regression models** as HDDS is a count variable
- Hypothesis –
 - Increased time allocated to productive activities leads to improved income and thereby improved HDDS and,
 - Increased time allocated to reproductive activities indicates greater care and therefore have an improved effect on HDDS.
- The two models considered were
 - $HDDS = \beta_0 + \beta_1 \text{productive time use (in hours)} + \beta_2(\text{Control variables}) + \varepsilon$
 - And
 - $HDDS = \beta_0 + \beta_1 \text{reproductive time use (in hours)} + \beta_2(\text{Control variables}) + \varepsilon$

HH DIET DIVERSITY WITH REPRODUCTIVE TIME USE BY MOTHER OF A CHILD < 5 Y

Covariate	Incidence Rate ratio	95% Confidence interval
Reproductive time use	1.01	1.006, 1.01
Wealth quartiles (Ref:Lowest)		
Second quartile	1.01	0.99,1.04
Third quartile	1.02	1.004,1.04
Fourth quartile	1.01	0.99,1.03
Farm production diversity HH involved in nutrient dense food production	1.04	1.03,1.06
Education Head of HH	1.01	1.008,1.02
HH size	1.003	0.99, 1.005

Other variables were not associated with HDDS in the model

- Distance from the market to purchase nutrient-rich food foods,
- Household head gender and,
- Age of the household head

HH DIET DIVERSITY WITH PRODUCTIVE TIME USE BY THE MOTHER OF A CHILD < 5 Y

Covariate	Incidence Rate	95% Confidence interval
Productive time use	0.99	0.98, 0.99
Productive labour (Y/N)	0.95	0.94,0.97
Wealth quartiles* (Ref:Lowest)		
Second quartile	1.01	.99,1.03
Third quartile	1.02	.99,1,03
Fourth quartile	0.99	.98,1.02
HH involved in quality food production	1.04	1.01,1.05
Education Head of HH	1.01	1.008,1.02
HH size	1.003	1.000,1.006

Other variables were not associated with HDDS in the model

- Distance from the market to purchase nutrient-rich food foods,
- Household head gender and,
- Age of the household head



KEY FINDINGS

- HH diet diversity is positively associated with reproductive time use and negatively associated with productive time use
- There is a competing effect of women's labour, measured in terms of time allocation, towards productive activities and reproductive activities – an opportunity cost of time
- Wealth of the household, education of the household head, household's involvement in nutrient rich food production and household size were all positively associated with HDDS

POLICY IMPLICATIONS



Reduce the drudgery of reproductive activities like water collection, household chores and

Improve the efficiency of labour on-farm jobs through gender sensitive agriculture mechanization and extension services, and crop diversification to high value crops



Improve access to off-farm/non-farm jobs for women, along the agriculture and livestock value chains, with appropriate wages which actually allow for income effect on nutrient adequate diet – Evaluate the impact of these programs



Emphasize and embed interventions that improve social agency of women across women's empowerment, social protection and all the other poverty alleviation and employment programs



Make social safety nets, women and children's social welfare scheme more gender sensitive - Services of safety net programs like center-based childcare could also prove to be critical in creating an enabling environment, by redistributing the unpaid care work - to reduce and reverse the competing effect on household food access and quality, empower women and at the same time, improve the quality of nurturing care for young children