

# Project Monitoring and Evaluation of JICA Technical Cooperation Project, using World Bank High Frequency Household Survey Method named SWIFT

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1. Purpose of trial use of SWIFT for JICA project
2. What is SWIFT ?
3. Outline of JICA Technical Cooperation Project
4. Framework of Data Collection
5. Result of analysis on Household expenditure
6. Result of analysis on Change of Farmer's Behavior by the Project
7. Findings
8. Lesson Learnt

# 1. Purpose of Trial use of SWIFT for JICA technical cooperation project

World Bank developed SWIFT (Survey of Well-being via instant and Frequent Tracking) as a monitoring and evaluation tools.

JICA Evaluation Dept. used SWIFT on trial basis for JICA technical cooperation project.

➤ To monitor and evaluate the Project for improvement of project implementation and appropriate ex-post evaluation

➤ To estimate Impact of Project



## 2. What is SWIFT ?

### Traditional consumption survey



**COSTLY** (\$1 ++ million)



**SLOW** (1+hours for an interview and 1+ years for processing)



**COMPLEX** – requires expertise and resources

### SWIFT survey



**LOW-COST** (\$7k to \$100k)



**QUICK** (7 minutes for an interview and 10 sec for processing)



**RELIABLE** and **USER-FRIENDLY**

Data source:

World Bank [The Concept and Empirical Evidence of SWIFT Methodology \(worldbank.org\)](https://www.worldbank.org)

## 3. Outline of JICA Technical Cooperation Project

### **【Project Name】**

Project for Market-Oriented Smallholder Horticulture Empowerment and Promotion (MA-SHEP)

### **【Project Period】**

April, 2017 ~ April, 2023 ( 5 years)

### **【Project site】**

Malawi (Total 24 districts in 5 years)

### **【Executing Agency】**

Ministry of Agriculture, Irrigation, and Water Development

### **【Beneficiaries】**

Smallholder homiculture farmers

# 3. Outline of JICA Technical Cooperation Project

## 【Overall Goal】

Livelihood of smallholder farmers is improved through practicing the MA-SHEP Package.

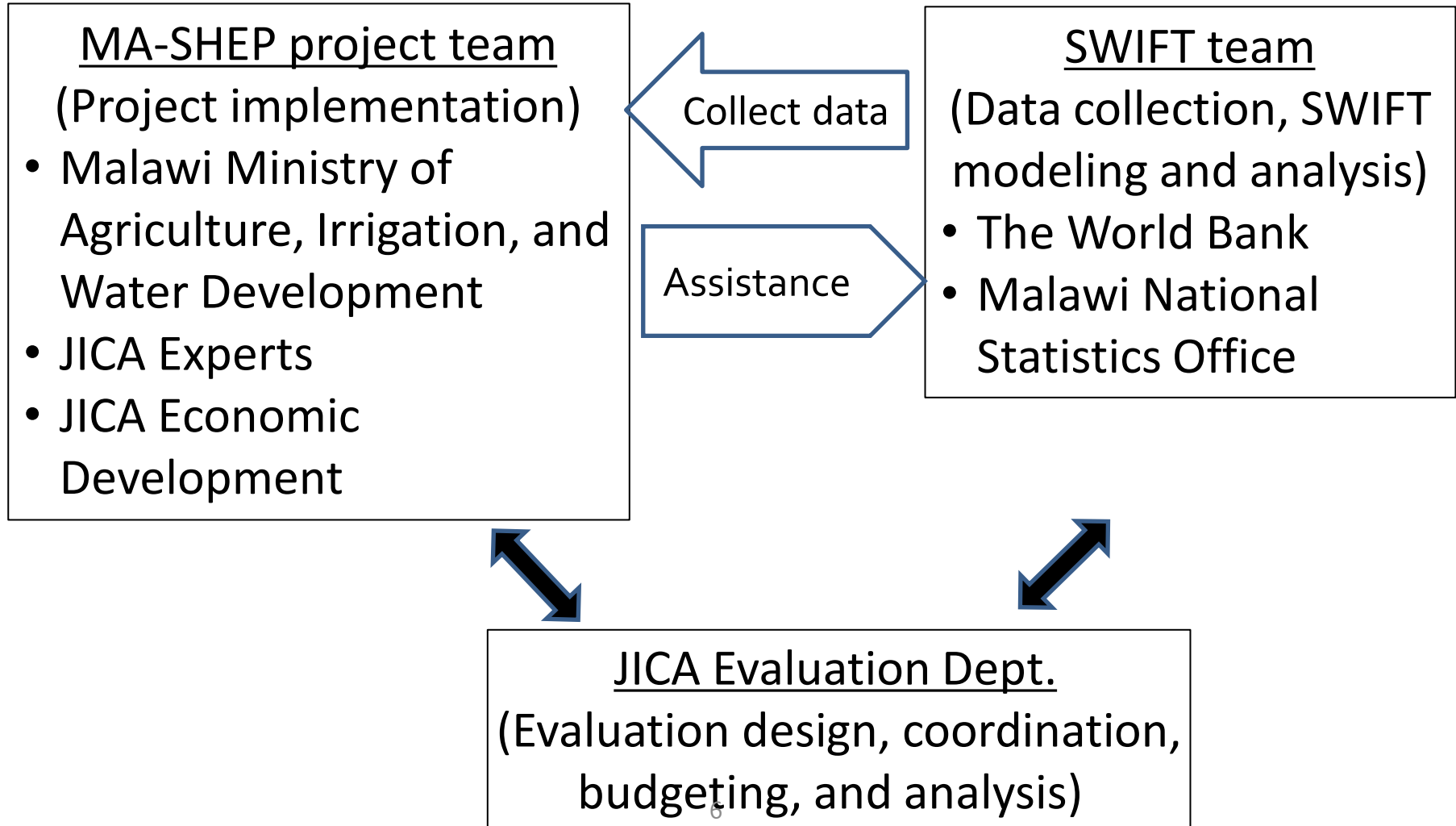
## 【Project Purpose】

The income of the members of the farmer's groups targeted by the Project is increased.

## 【Outputs】

1. Implementing system for the MA-SHEP Package is established.
2. The MA-SHEP Package is developed.
3. The MA-SHEP Package is continuously practiced by the target farmer groups.

# 4. Framework of Data Collection



## 4. Survey Purpose

- ① To monitor and assess **change in income** of smallholder horticultural farmer by the Project
  - To estimate change of household expenditure using existing variables based on SWIFT
  
- ② To monitor and assess **change in behavior** of smallholder horticultural farmer by the Project
  - To estimate change of behavior by adding specific questions related to MA-SHEP



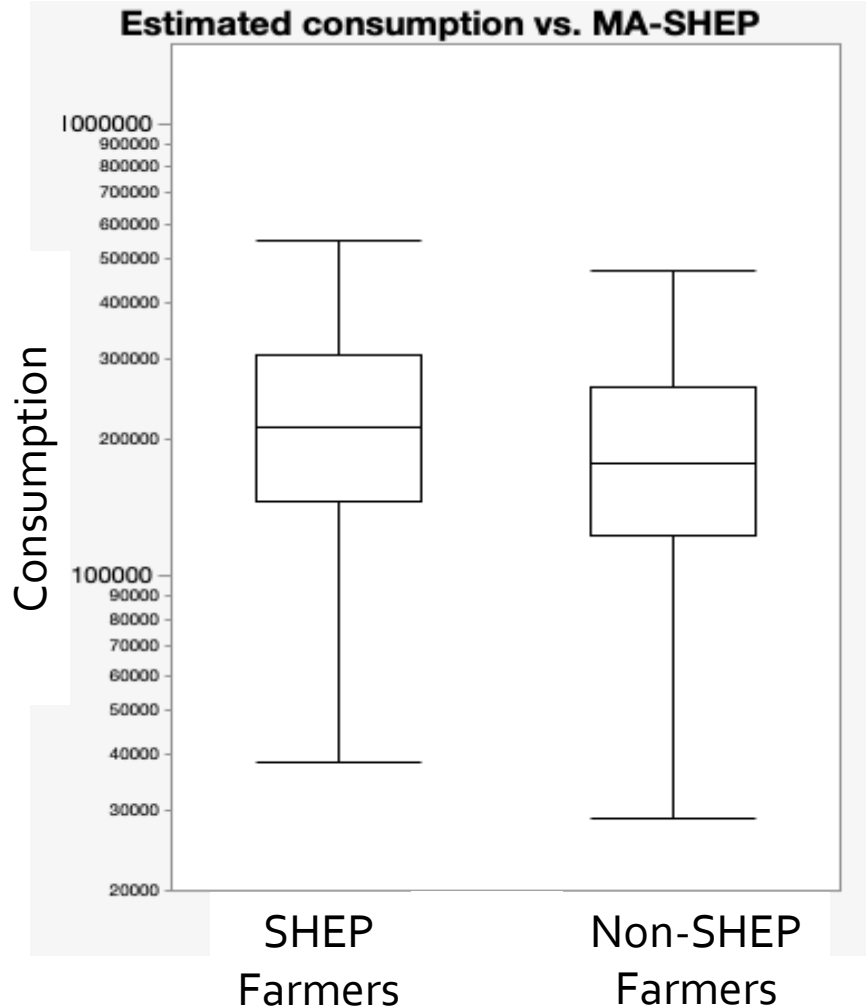
## 5. Analysis on household expenditure

**SWIFT** uses machine learning, statistics and econometric to identify **10-15 variables** most likely to be associated with household income and expenditure to estimate poverty levels.

In this case, the following variables based on SWIFT is used to estimate the household expenditure.

- Flooring Material
- Roofing Material
- Type of lighting
- Type of cooking fuel
- Waste disposal facilities
- Type of toilet
- Possession of mortar
- Possession of bed
- Possession of radio
- Possession of iron
- Possession of bicycle
- Possession of table
- No. of rooms
- No. of household members
- No. of dependent family members
- Family educational background etc.

# 5. Result of Analysis on Household Expenditure



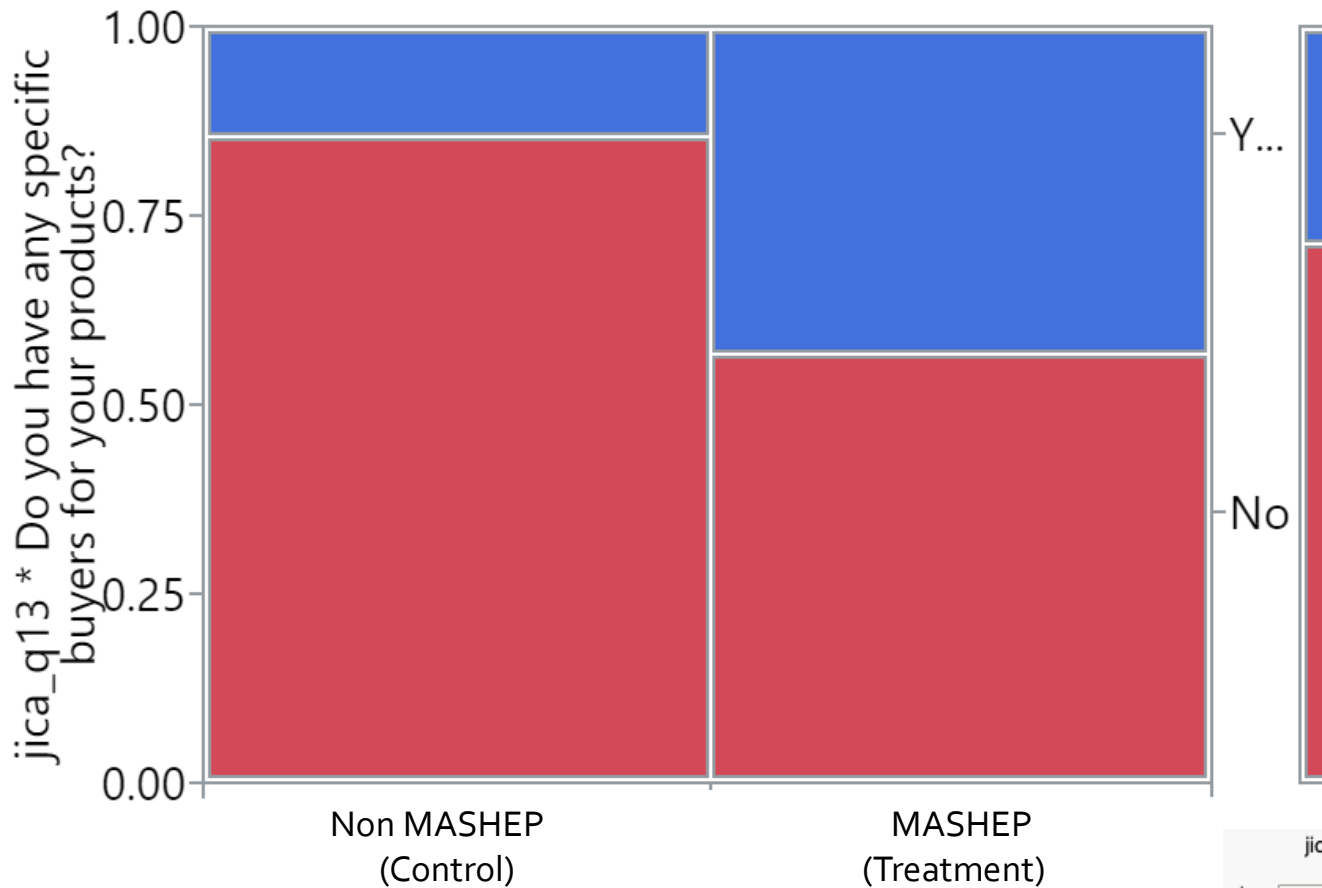
- SHEP Effect at the immature timing  
Immature timing/level of effect of MA-SHEP for household expenditure was examined.
- Expected direction of SHEP effect was observed  
Although within less than one year MA-SHEP implementation, median and other percentiles of household expenditure was slightly increased.

## 6. Analysis on Change of Behaviors

In addition to the SWIFT variables, JICA **added questions (37 items) related to MA-SHEP** with special attention to change of farmer's behavior by the Project.

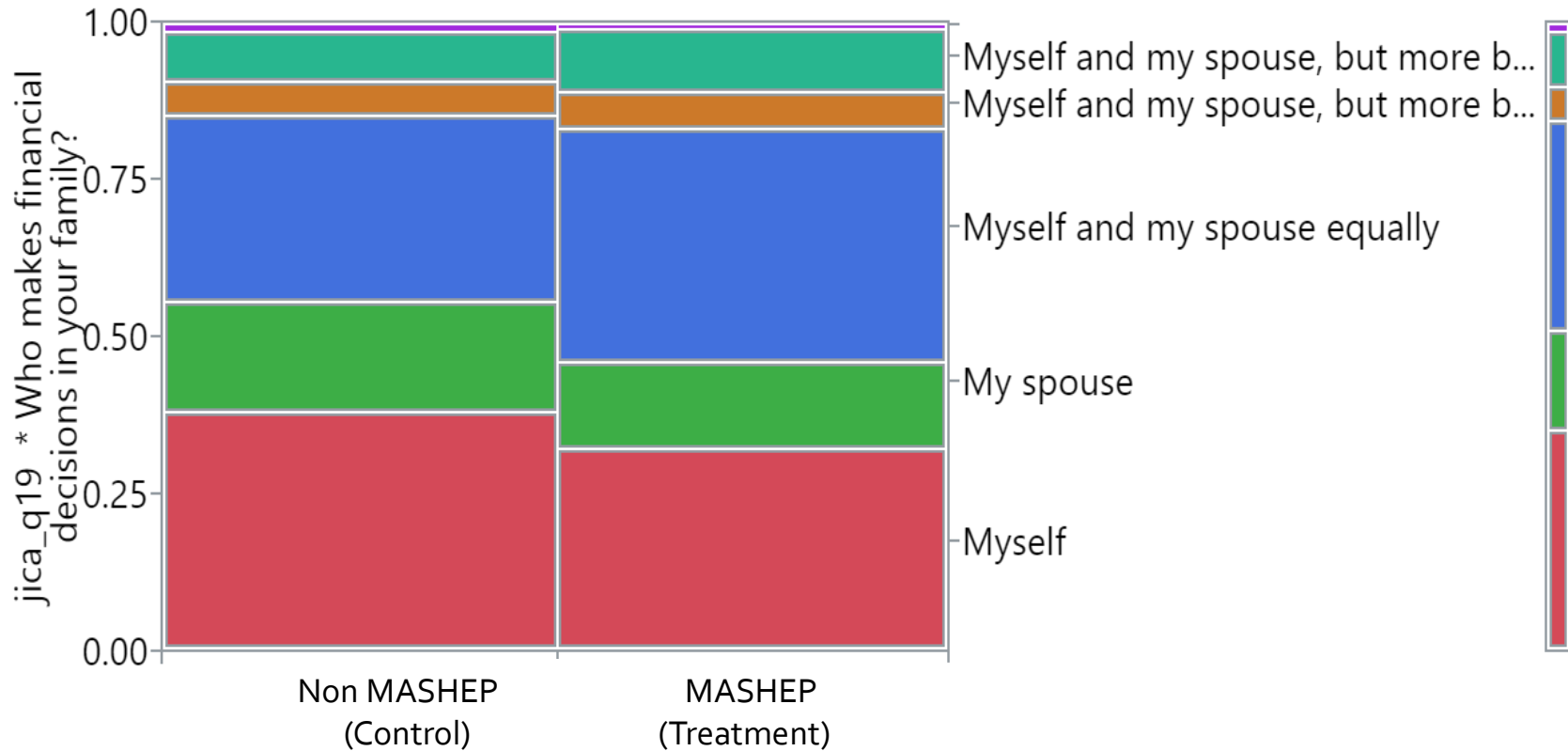
- Location of farmer's group
- Type of crops grown
- Frequency of farmer's group meeting
- Actual information sharing in farmer's group
- Frequency of market research, presence of buyers
- Decision making process
- Psychological indicators (motivation, relationship with members, etc.)
- COVID-19, cyclone and drought damage and recovery

## Q13. Do you have any specific buyers?



	Count	No	Yes	Total
Mashep or Non-mashep	Row %			
	control	2862	470	3332
Mashep or Non-mashep	treatment	1870	1426	3296
	Total	56.74	43.26	6628
		4732	1896	6628

## Q19. Who makes financial decisions?



		jica_q19 * Who makes financial decisions in your family?							
Mashep or Non-mashep	Count	Myself	My spouse	Myself and my spouse equally	Myself and my spouse, but more by my spouse	Myself and my spouse, but more by myself	Others	Total	
control	1262	587	991	190	260	42	3332		
	37.88	17.62	29.74	5.70	7.80	1.26			
treatment	1058	452	1237	185	334	30	3296		
	32.10	13.71	37.53	5.61	10.13	0.91			
Total	2320	1039	2228	375	594	72	6628		

# 6 Results of Analysis on Change of Behaviors

Change of the farmer's behavior by the Project is confirmed based on analysis of additional questions related to MA-SHEP.

	Farmer's Behavior	Questions	Result
1	Conduct market research and gather information	j1, 2, 8	Achieved
2	Find specific buyers in advance.	j13, 14, 15	Achieved
3	Communicate regularly with your sellers	j16, 17	Achieved
4	Active exchange of information within the group	j3-7, 9, 10-12, 21	Achieved
5	Perform joint shipping.	j23, 24	Achieved
6	Make a joint purchase	j25, 26	Achieved
7	Improve livelihoods	poverty estimate	Achieved
8	Gender Awareness.	j8, 18, 19, 20	Achieved
9	Increased motivation	j31, 32, 33, 34, 35, 36, 37	Achieved
10	grow in confidence	j27, 28, 29, 30	Achieved

## 7. Findings

### ① Analysis on Household Expenditure

Household expenditure of MA-SHEP farmer is likely to be higher than Non MA-SHEP farmer.

### ② Analysis on Farmer's Behaviors

The change of farmer's behaviors by the Project is confirmed at the time of project completion.

## 8. Lesson learnt

- Evidence based project monitoring is useful for timely and flexible project implementation to achieve goal of the project.
- Baseline data is indispensable for DID (Difference in Difference) or other before-after analysis of causal relationship of effect and impact by the Project.



