

## FACTORS INFLUENCING ENROLLMENT IN AGRICULTURE COURSES

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## BRIEF OUTLINE OF PRESENTATION

- I. Introduction
- II. Methodology
- III. Summary of Findings, Conclusion and Recommendation



## INTRODUCTION

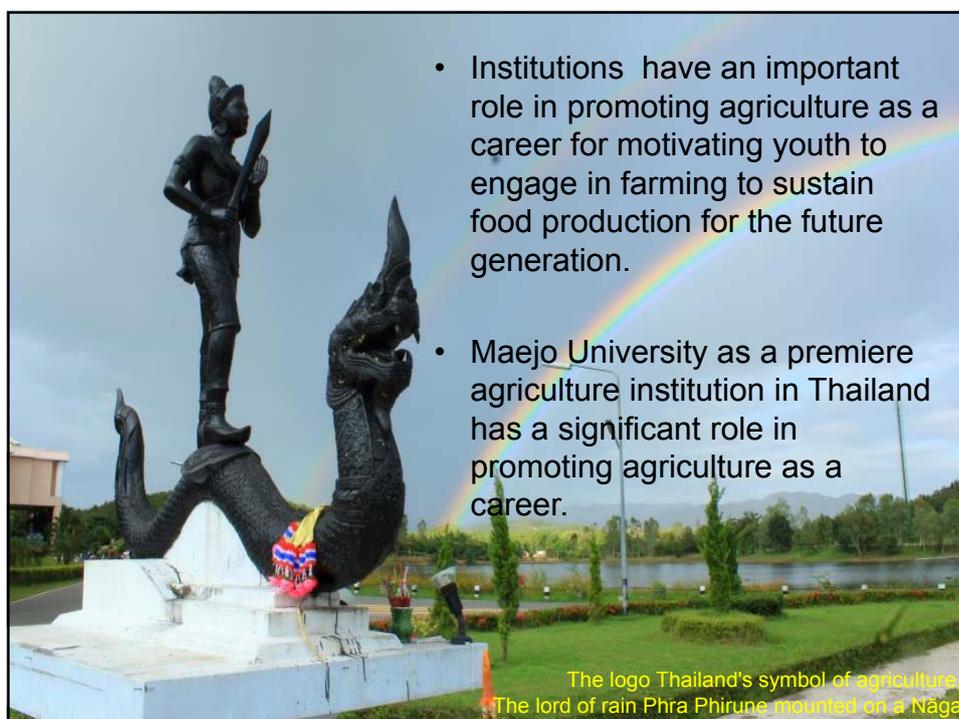
Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.



- In many Asian countries, the agricultural sector is undergoing transformation, with changes in the contribution of the different sub-sectors occurring.



- Thailand is one of Asia's leading food producers and exporters of **agriculture products** to other countries. It is believed that agriculture education among other factors has been instrumental to agricultural development in the country.
- Agriculture as a major pillar to the nation's economy should remain as an integral component of the country's higher education program.
- The future of Thailand's agriculture depends on the **quality of education** the country offers.



Younger generation seems not much interested in agriculture as vocation or career, most would rather have white collar jobs than blue collar job. Thus, in rural areas, agricultural production decline.

In Southeast Asia, six countries were surveyed to determine enrolment trends in Agriculture Education

- ✓ Philippines is decreasing sharply
- ✓ Vietnam is decrease
- ✓ Laos significant increase in enrolment in certificate and diploma
- ✓ Indonesia is increase

(Food and Agriculture Organization of the United Nations)

Other Universities in Thailand with increased enrollment in Agriculture courses, 2006-2010

- ✓ Kasetsart University
- ✓ Chiang Mai University

▪ Other Universities in Thailand with decreased enrollment, 2006-2010

- ✓ Naresuan University
- ✓ Prince of Songkla University
- ✓ Khon Kaen University
- ✓ King Mongkut's Institute of Technology

(Office of the Higher Education Commission, Thailand)

- This problem is linked to the prospects and aspiration of students in staying out of the agricultural sector.
- I examined the enrollment trend in Maejo University as a premiere agriculture institution in Thailand whether it declines just like the trend in other schools in Thailand and Asia
- Knowledge of the trend is important because the **status in enrollment in agriculture** and related fields could be an indication of the decreasing competitiveness of agriculture.
- It is in this context that the study was undertaken **to determine the factors that influence the decision of students** for enrollment in agriculture courses in Thailand.

### Objectives of the Study

*The main objective of the study is to determine the factors that **influence the students' decision** to enroll in agriculture courses.*

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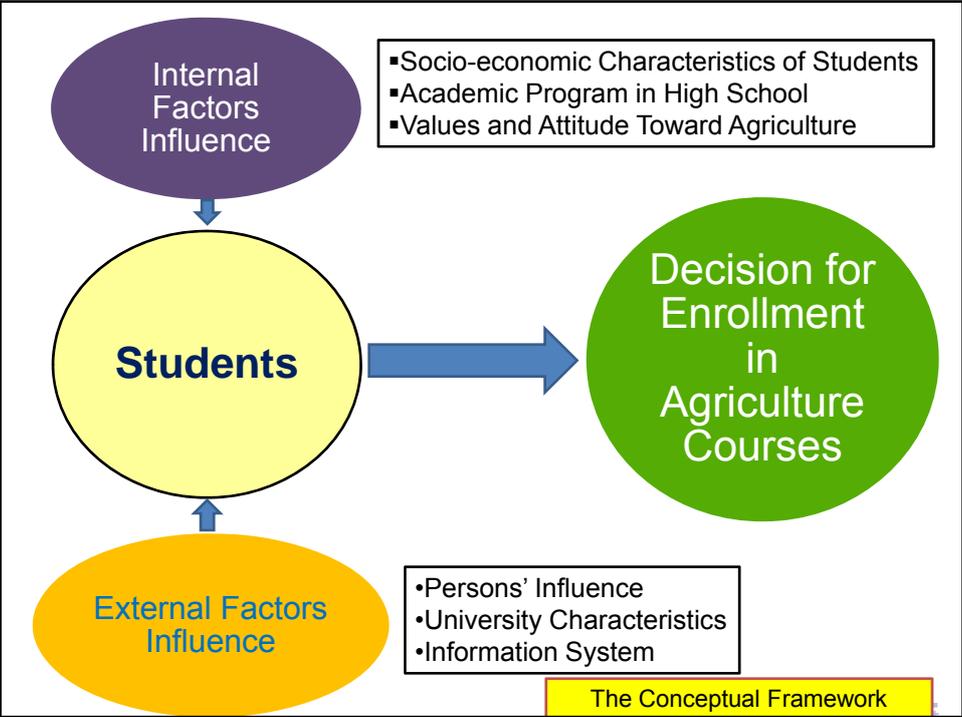
- Describe the internal and external factors that may have influence on the students' decision to enroll in agriculture courses;
- Analyze the decision and reasons of the respondents for enrolment in agriculture courses;
- Determine the internal and external factors **that influence the decisions** of the respondents to enroll in agriculture courses.

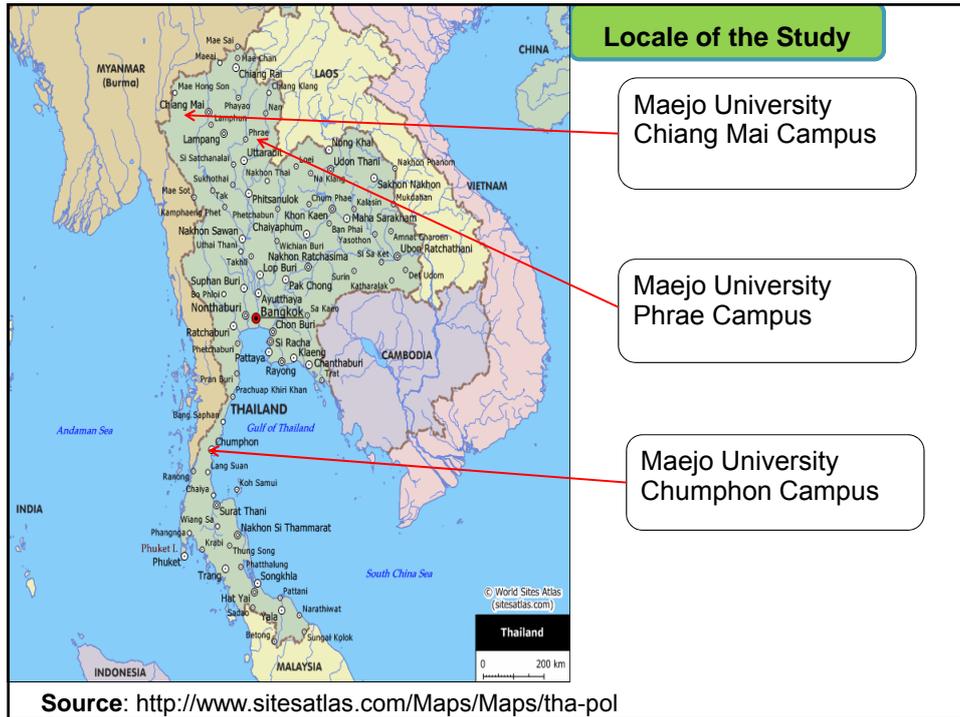
**METHODOLOGY**



*“Hard work never kills anyone”*

“ The principle of the students in Maejo University”





## Respondents

320 **first year university students** taking up agriculture and 350 non-agriculture students to provide deeper insights on enrolment decision.

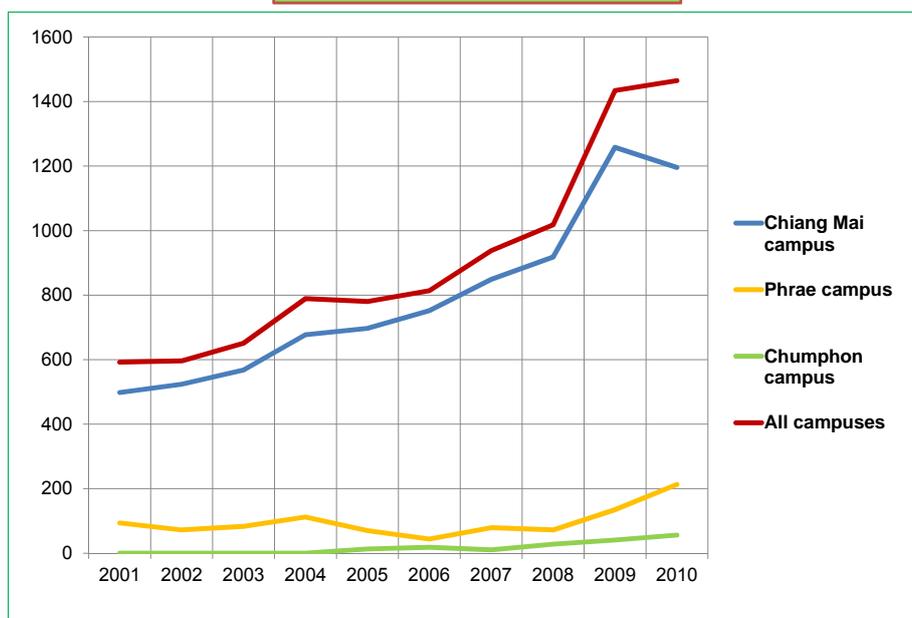
## Methods of Analysis

The data were analyzed using the following:  
 Descriptive analysis  
 Probit analysis

### Agriculture courses offer in Maejo University (SY 2010-2011)

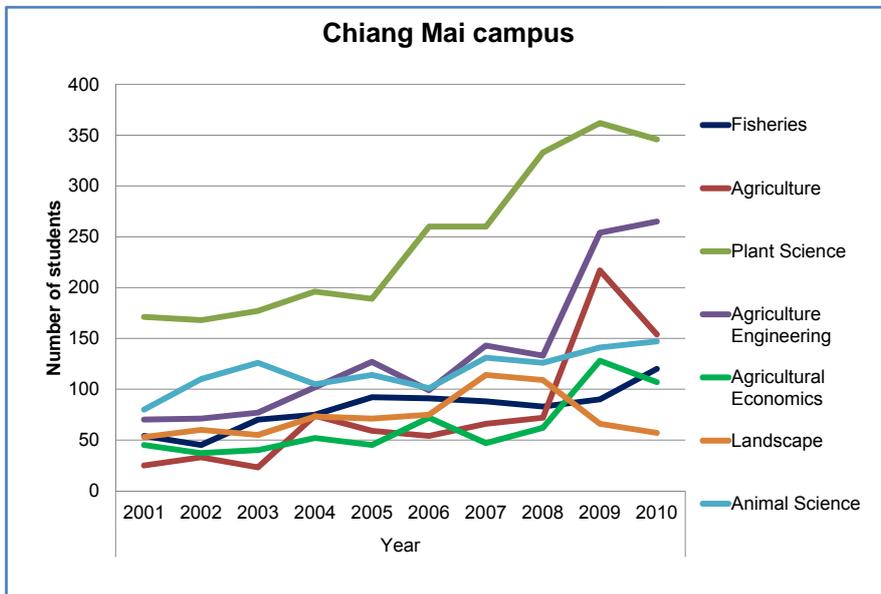
- |                                  |  |
|----------------------------------|--|
| 1. Agricultural Economic         | 10. Crop Production Technology         |
| 2. Agriculture (Agro-Chemistry)  | 11. Fisheries                          |
| 3. Agriculture (Crop Protection) | 12. Landscape Architecture             |
| 4. Agriculture (Soil Science)    | 13. Materials Science(Rubber Industry) |
| 5. Agriculture Engineering       | 14. Plant Science (Agronomy)           |
| 6. Agriculture Extension         | 15. Plant Science (Pomology)           |
| 7. Agro-Forestry                 | 16. Postharvest Technology             |
| 8. Animal Production Technology  | 17. Renewable Energy                   |
| 9. Animal Science                | 18. Technology Landscape               |

### Summary of Findings



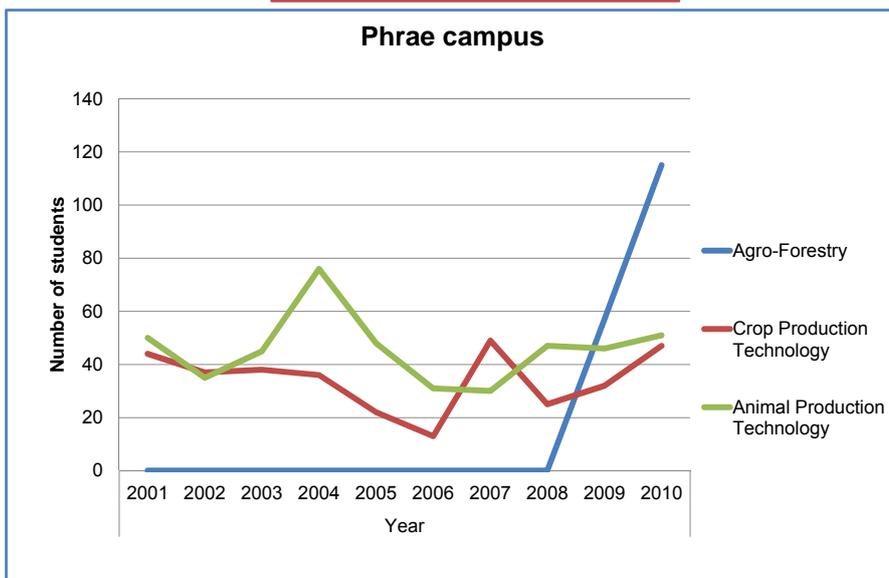
Enrolment Trend in Agriculture Courses in Maejo University, 2001-2010

**Summary of Findings**



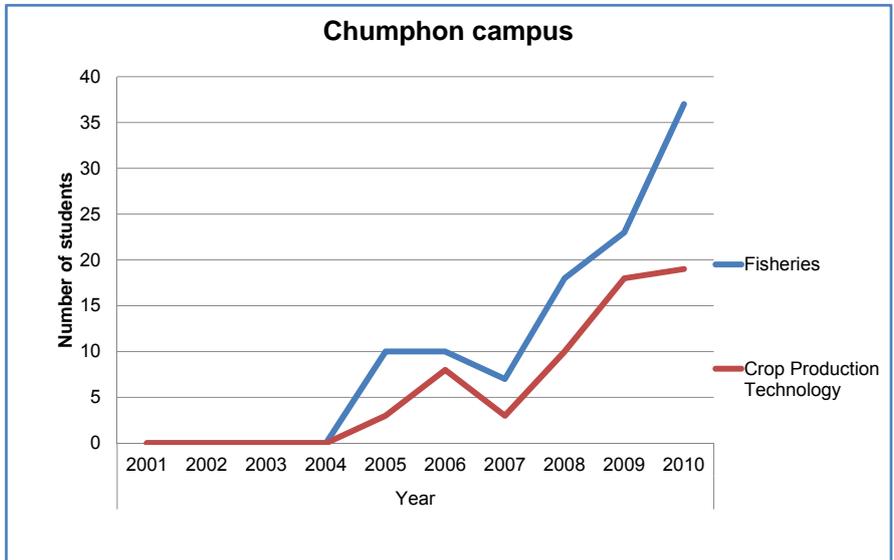
**Number of students enrolled in agriculture, Chiang Mai campus, 2001 – 2010**

**Summary of Findings**



**Number of students enrolled in agriculture courses, Phrae campus, 2001 – 2010**

**Summary of Findings**



Number of students enrolled in agriculture courses, Chumphon campus, 2001 – 2010

**Summary of Findings**



Identity of Maejo University

**First Year Enrollment in Agriculture vs non-Agriculture in ten year period.**

- Increasing trend in enrollment in agriculture courses.
- But lags behind non-agriculture courses in terms of annual increases and actual enrollment.
- 11.23% in agriculture vs 22.10% for non-agriculture from 2001-2010.
- Actual enrollment in 2010 in agriculture courses is 1,465, in non-agriculture courses is 2,516.

## Characteristics of Internal Factors

**Internal Factors** - as those factors that are internal to the students in their decision making.

### • Socio-economic Characteristics of the Agriculture Students

- Majority are **female** and reside in **rural areas**.
- Most of the parents had **4-7 years in school** (elementary, junior high school) and are **farmers**.
- The average household **income** is 18,485 Baht per month.
- **In comparison**, non-agriculture students have **higher** household **income** of 21,495 Baht per month.
- The major source of money for education are **the parents**.

### • Academic Program in High School

- Almost all the respondents in agriculture courses were enrolled in **Science and Mathematics program** in High School; while about 50% of the respondents in non-agriculture courses were enrolled in the same program in high school.
- They had taken **agriculture subjects** in high school, had agriculture related **experiences** earned in high school and in their respective homes.
- Most agriculture students participated in Future Farmers of Thailand (**FFT**) while in high school.
- The agriculture students had **GPA** of 2.93 in high school while the non-agriculture had 2.99.

- **Values and Attitudes of the students toward Agriculture**

Using several statements as indicators of values and attitudes toward agriculture, and allowing the students to rate them from 1 to 5 (strongly disagree to strongly agree), results showed that:

The agriculture students had a mean rating of 3.86 for values and 4.04 for attitudes with qualitative rating of “agree” to the different statements.

Agriculture students have the same values and attitudes toward agriculture with non-agriculture students.

This could be explained by the fact that they had experiences in agriculture, most of their parents were working as farmers and they lived in rural areas which were predominantly agricultural.

## Characteristics of External Factors

**External Factors** - are those external to the students in their decision-making.



## University Characteristics

Normal load for First Year students per semester 18 to 19 units.

### ➤ Cost of education per semester

#### ▪ Agriculture Students

Mean -Tuition Fee = 9,493.44 Baht

- Major Maintenance Fee = 3,068.75 Baht

Total = 12,562.19 Baht

#### ▪ Non-agriculture students

Mean -Tuition Fee = 8,712.29 Baht

- Major Maintenance Fee = 2,391.43 Bah

Total = 11,103.72 Baht

The data indicatives that agriculture courses is **more expensive** than non-agriculture courses by as much as 1, 459 Baht or 13%.

### ➤ Only few agriculture students have scholarships similar with non-agriculture.

## University admission system

Students in in agriculture were admitted by

- Quota system
- Admission entrance examination system,
- Direct apply admission system, and
- Alumni quota system.
- The same admission system for non-agriculture students.

## Information System Influence

Majority of the students in agriculture and non-agriculture courses **received information** about their course from:

- Website,
- Teachers in high school, and
- Video
- The same for non-agriculture students

## Reasons of respondents to enroll in Agriculture courses

### *Why enroll in agriculture course?*

1. I have better opportunity to be employed in a good institution, company, or in government.
2. I believe agriculture course could help me develop my potentials.
3. When I graduate, I can work in a variety of jobs.
4. I like agriculture course, we have farm.
5. I like to be with nature, so I take agriculture course.
6. My parents want me to study agriculture course.

## Influence of the Internal and External Factors on the Decisions of the Respondents to Enroll in Agriculture Courses



### Internal Factors With Significant Influence to Enroll in Agriculture Courses

#### Socio-economic characteristics of students

VARIABLES	Probit Model		Marginal Effects
	Coefficient	Prob.	Coefficient
<b>Occupation of parents</b> Father (farming)**	0.551861	0.0051	0.21445

#### Academic program in high school

VARIABLES	Probit Model		Marginal Effects
	Coefficient	Prob.	Coefficient
Program enrolled in high school (Science and mathematics)**	2.063390	0.0000	0.802168
Club/Association/Society participated in high school (Future Famer of Thailand)*	0.604384	0.0112	0.241115
Agriculture subjects taken in high school*	-0.468973	0.0226	-0.17899
GPA in high school**	-0.551432	0.0012	-0.21999

**External Factors With Significant Influence to Enroll in Agriculture Courses**

**Person influence**

VARIABLES	Probit Model		Marginal Effects
	Coefficient	Prob.	Coefficient
Father*	0.312877	0.0288	0.093662
Teacher in high school*	0.376547	0.0252	0.110489
Own self*	0.778048	0.0298	0.310396
Mother*	-0.350530	0.0155	-0.08947
Friend*	-0.323838	0.0405	-0.11097
High school faculty counselor*	-0.363000	0.0136	-0.13487

**University influence**

VARIABLES	Probit Model		Marginal Effects
	Coefficient	Prob.	Coefficient
Tuition fee**	0.000428	0.0000	0.000171

## Conclusion

- There is an increasing trend in agriculture enrollment in Maejo University.
- Decision to enroll in agriculture courses among First Year students is influenced **positively** by:
  - ✓ Father being a farmer
  - ✓ Science and Mathematics enrolled in High School
  - ✓ Cost of education
 And **negatively** by:
  - ✓ Agriculture subjects taken in high school,
  - ✓ GPA in high school

## Recommendations

- ❖ It is the policy of higher education in Thailand that only students enrolled in Science and Mathematics Program in high school can take agriculture courses.
  - ✓ It is therefore recommended that the university administrators should **review the policy and consider** the possibility of students enrolled in other programs in high school to enroll in agriculture courses in higher education to sustain good number of enrollees in agriculture courses.

- ❖ Membership to Future Farmers of Thailand should be encouraged.
  - ✓ Learning activities and exposure to agriculture can be enriched through participation in FFT activities to motivate students to enroll in agriculture.
  - ✓ The University can utilize its agriculture extension program to collaborate with high school counselor and members of FFT to reach out potential enrollees.
  
- ❖ Make the agriculture subject more interesting and relevant to enjoin the high school students to enroll agriculture.
  - ✓ High school teachers should design a community-based curriculum in agriculture relevant to community needs to motivate the student to like the subject and later enroll in agriculture courses in higher education.

- ❖ The institutions must build a strong linkage with the farmer parents to promote agriculture courses and programs of the university.
  
- ❖ Those enrolled in agriculture have lower income, yet, pay higher cost of education. If income from farming remains to be lower and cost of education to be higher, it may lead to decreasing enrollment.
  - ✓ The University should re-examine the cost of agricultural education, and provide more scholarship grants and assistance.
  
- ❖ Teachers should be tapped to advocate the importance of agriculture to the society.
  - ✓ Teachers and high school faculty counselors should be given opportunity to attend trainings in the field of agriculture to be updated on recent trends in agriculture technology and be provided with adequate learning resources.

- ❖ To increase enrolment in agriculture,
  - ✓ make agriculture a profitable business,
  - ✓ provide more facilities in the university for effective teaching and learning,
  - ✓ more practical works for students in the field.
  
- ❖ Similar research should be conducted in other universities offering agriculture courses to generate
  - ✓ an over-all picture of the enrollment trend in the country;
  - ✓ more macro level policies and programs could be developed.

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*Thank you  
for listening*

Kopkun  
Krub....

Salamat Po!..

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