SIRIWAN SNGUANCHUER : BALANCING OF DEMAND FOR AN SUPPLY OF AGRICULTURAL OUTPUTS : A CASE STUDY OF SI SA KET. THESIS ADVISOR : ASSI. PROF.SOMCHAI RATTANAKOMUT, Ph.D, THESIS CO -ADVISOR : ASSO.PROF.WARIN WONGHANCHAO, Ph.D. 197 PP. ISBN 974-581-079-7

The purpose of this study is to construct a macroeconomic model of the agricultural sector in Sisaket province, Thailand; and use it to examine the effect of government policies on agricultural output and employment. This model takes into consideration many factors including: population aggregate demand, aggregate supply; the supply and demand of agricultural factor inputs, labor supply, and macroeconomic indicators. The model is based on the Computerized System for Agriculture and Population Planning Assistance and Training (CAPPA) developed by the United Nations Food and Agricultural Organization (FAO). CAPPA is used to examine the relationship between population and agricultural development with minimum restrictions on model structure. The reserch in this study is based on four cases. The following assumptions differentiate each of the four cases:

1. Aggregate demand and supply grows at the historical rate
2. Aggregate demand is constrained by fixing the population growth rate at 1.006 %
3. There is an increase in the supply of agricultural products as a result of agriculture extension programs administered by the Ministry of Agriculture
4. The aggregate demand assumptions in (2.) and aggregate supply assumptions in (3.) are binding simultaneously

It was found that Sisaket province is self-sufficient in many agricultural products with any surplus exported to other provinces. However, Sisaket remains dependent on factors of production supplied by other provinces. Additionally, it was discovered that there will be an increase in non-agricultural production in Sisaket because of a declining population participation rate in the agriculture sector. The principal agricultural power source is human labor and draft animals. Increasingly, gasoline powered machines are replacing draft animals as the primary source of agricultural traction. This is raising agricultural productivity and as a result, the value added to agricultural output.

Comparing the four cases revealed thet there is no significant impact on the contribution to Gross Provincial Product (GPP) of either the agricultural or non-agricultural sector when population growth is controlled. However, there was a reduction in the unemployment rate and food consumption. These trends combined to raise the agricultural surplus and exports. It was found that there is no significant of a change in population growth rate on aggregate supply when government policies designed to raise agricultural productivity are implemented. However, agricultural unemployment declined with rising exports, output, and productivity. When both aggregate demand and supply are controlled simultaneously, the GPP was at its maximum with the lowest rate of unemployment.