SOCIAL NETWORK ANALYSIS FOR DETERMINING CATTLE AND POULTRY MOVEMENT PATTERN IN LAMPUNG, WEST JAVA AND CENTRAL JAVA PROVINCES IN INDONESIA



IN VETERINARY SCIENCE adams y science

> GRADUATE SCHOOL CHIANG MAI UNIVERSITY AUGUST 2017

SOCIAL NETWORK ANALYSIS FOR DETERMINING CATTLE AND POULTRY MOVEMENT PATTERN IN LAMPUNG, WEST JAVA AND CENTRAL JAVA PROVINCES IN INDONESIA



A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL FULFILLMENT THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE A Copyright Of Chiang Mai University A L L r i g h t s r e s e r v e d

GRADUATE SCHOOL, CHIANG MAI UNIVERSITY AUGUST 2017

SOCIAL NETWORK ANALYSIS FOR DETERMINING CATTLE AND POULTRY MOVEMENT PATTERN IN LAMPUNG, WEST JAVA AND CENTRAL JAVA PROVINCES IN INDONESIA

GUNAWAN SETIAJI

THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN VETERINARY SCIENCE

Examination Committee:

(Dr. Anuwat Wiratsudakul)

...... Chairman Vende ?. Advisor

.....Co-advisor

(Asst.Prof.Dr.Veerasak Punyapornwithaya)

..........

Advisory Committee:

Veurde P. Member

(Asst. Prof. Dr. Veerasak Punyapornwithaya) (Asst.Prof.Dr.Sukolrat Boonyayatra)

Waryh Minj Member Warfh Ming Co-advisor (Dr. Warangkhana Chaisowwong)

(Dr. Warangkhana Chaisowwong)

31 August 2017 Copyright © by Chiang Mai University

ACKNOWLEDGEMENT

I would first like to thank my thesis advisor Assist. Prof. Dr. Veerasak Punyapornwithaya of the Faculty of Veterinary Medicine at Chiang Mai University.

My sincere thanks also go to Dr. Syamsul Ma'arif and Dr. Triguntoro, Disease Investigation Center of Lampung, who allowed me to leave my work for study and Dr. M. Sybli, Directorate of Animal Health, who gave access to retrieved iSIKHNAS database. Without they precious support it would not be possible to conduct this research

I would not have been able to finish my thesis work without financial support from Food and Agriculture Organization of the United Nations (FAO), Emergency Centre for Transboundary Animal Diseases (ECTAD) thankful to Dr. Luuk Schoonman for his valuable guidance.

Last but not least, I would like to express my deepest gratitude to my wife, Reni, and my children, Fiona and Galih for supporting me spiritually throughout writing this thesis and my life in general.

Gunawan Setiajiลิปสิทธิ์มหาวิทยาลัยเชียงใหมCopyright[©]by Chiang Mai UniversityAll rights reserved