

**AN ANALYSIS OF TRANSACTION COSTS AND
GOVERNANCE STRUCTURES OF ARTISAN TUNA
FISHERIES IN EAST JAVA, INDONESIA**

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B.Ec. M.App.Ec.

Doctor of Philosophy

School of Agriculture, Food and Wine

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This thesis is submitted in fulfilment of the
requirements of the degree of
Doctor of Philosophy

The University of Adelaide

**School of Agriculture, Food and Wine
Faculty of Sciences**

July 2015

DECLARATION

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LIST OF ABBREVIATIONS

AFs	= artisan fishermen
AGFI	= adjusted goodness of fit index
ATFEs	= artisan tuna fishing economies
AVE	= average variances extracted
CFA	= confirmatory factor analysis
CFI	= comparative fit index
CR	= construct reliability
EFA	= exploratory factor analysis
FAD	= fish aggregating device
GC	= governance structure
GFI	= goodness of fit index
GPS	= geographical positioning system
IFI	= incremental fit index
ISB	= Indonesian Statistics Bureau
IV	= instrumental variable
KUD	= Koperasi Unit Desa
LPM	= linear probability model
ML	= maximum likelihood
MLE	= maximum likelihood estimation
MSY	= maximum sustainable yield
NFI	= normed fit index
NNFI	= non-normed fit index
RMSEA	= root mean square error of approximation
SEM	= structural equation modelling
SRMR	= standardised root mean square residual
TCE	= transaction costs economics
TLI	= Tucker Lewis index

DEDICATION

I dedicate this work to my family: my beloved wife, Astridi elsapranduwardhani and to my children, Alysha khadeeja satria, Akhsan muhammad satria and Aaliyah fatima satria.

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ABSTRACT

This study examines transaction costs and the contract relationship formed by artisan fishermen (AFs) in the artisan tuna fishing economies (ATFEs) in East Java, Indonesia. More specifically, this study investigates: (a) the various types of governance structures in ATFEs; (b) the roles of the key actors in the marketing value chain; (c) contracts and relationships; (d) transaction characteristics; (e) the importance of risk behaviour; (f) factors affecting transaction costs in ATFEs; and (g) the role of trust in contract fishing.

This study used a combination of both qualitative and quantitative approaches, which is known as a mixed methods approach. A qualitative approach was applied to gain better understanding of the application of the transaction costs economics (TCE) framework in the context of contract fishing. Further to this, a quantitative approach was employed to examine factors influencing AFs to engage in the contract relationship, as well as to investigate factors affecting transaction costs. The mixed method approach is applied to gain a holistic understanding about the marketing value chain in artisan tuna fishing economies

The survey study, which involved 440 AFs, from December 2012 to February 2013, in five sample areas, namely Malang, Pacitan, Trenggalek, Banyuwangi and Jember, reveals that AFs who entered into fishing contracts with middlemen had a higher level of human specificity and conducted transactions more frequently than those who did not. Additionally, AFs who did not have contracts with the middlemen were also found to be risk takers. Lastly, it was found that AFs who did not have contracts with the middlemen faced a higher level of uncertainty than those who did.

A Probit model was used to examine factors influencing the AFs to engage in a contract relationship with the middlemen. The results indicate that a higher level of uncertainty tends to decrease the motivation of AFs to engage in a contract relationship as uncertainty creates bigger profit opportunities for the AFs and thus increases their motivation to avoid contract relationships.

Structural equation modelling is used to examine factors affecting transaction costs. The results show that trust has a role in limiting opportunistic behaviour, allowing AFs to adopt a less complicated safeguard, thereby economising on transaction costs. Furthermore, uncertainty has a significant effect on the transaction costs, as uncertainty increases the need for safeguarding (i.e. evaluating and monitoring the contract agreement) which, in turn, affects the level of transaction costs.

The findings show the importance of trust and transaction characteristics affecting transaction costs and AFs' motivation in the contract choice. Policy support in the artisan tuna fisheries industry should put a greater focus on the major transaction costs in the contract relationship formed by the AFs and the middlemen. Such policy support would help in strengthening the marketing value chain to become more sustainable, efficient and commercially viable, benefiting all the key actors in the tuna industry's value chain.

Keywords: *artisan fishermen, marketing value chain, governance structure, transaction cost economics, transaction characteristics and transaction costs.*