UNIVERSITI PUTRA MALAYSIA

CONTRIBUTION OF GROUP DYNAMICS FACTORS TO TECHNOLOGY ADOPTION AMONG MALAYSIAN COCOA FARMER CLUSTERS

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DOCTOR OF PHILOSOPHY

UNIVERSITI PUTRA MALAYSIA

2012

CONTRIBUTION OF GROUP DYNAMICS FACTORS TO TECHNOLOGY ADOPTION AMONG MALAYSIAN COCOA FARMER CLUSTERS

By

PHILPH @ RAMLE BIN KASIN

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the degree of Doctor of Philosophy

CONTRIBUTION OF GROUP DYNAMICS FACTORS TO TECHNOLOGY ADOPTION AMONG MALAYSIAN COCOA FARMER CLUSTERS

By

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March 2012

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Faculty : Educational Studies

The contribution of Group Dynamics Factors (GDF) is crucial in group development. However, the extent of their influence on cocoa farmer's group performance in Malaysia is never deliberated. This research attempts to look at the contribution of GDF to the successful technology adoption (TA) of Malaysian Cocoa Farmers Clusters (CFC). The main objective is to determine GDF that influence the success of TA among CFC under the program of Malaysia Cocoa Board (MCB) in Malaysia. It also attempts to identify the discriminating factors between successful and less successful TA among CFCs.

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The approach used in this study involves a systematic collection of data and information on 136 samples of CFC in Malaysia which involved 681 members of CFC. Stratified sampling method was employed in this study. The data investigated were GDF that consists of collection of individual units that combine together to form an integrated and a complex whole. The GDF were divided into three main components which were individual inputs (demographic), group inputs and external inputs (MCB extension agent coordination ability). The interaction among the GDF during group process led to TA. Multiple Regression Analysis (RA) was used to determine the predictors of successful TA among CFC. Discriminant Analysis (DA) was applied to verify GDF that differentiate between successful and less successful CFC in terms of TA.

The study shows that the success of TA among CFC is contributed by the GDF. These are membership attraction; EA CFC coverage; cocoa farming experience; and the role of participation in CFC. The greatest predictor was membership attraction. The study also reveals the existence of differences in GDF between less successful and successful CFC.

The findings of this study indicate significant role of cluster in spearheading TA among cocoa farmers in a larger scale. It provides a road map for MCB to better understand the breakdown and the nature of cocoa farmers' clusters so as to create realistic prospect on cocoa farmers' development through cluster approach.

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Abstrak thesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

SUMBANGAN FAKTOR DINAMIK KUMPULAN TERHADAP PENERIMAAN GUNA TEKNOLOGI DALAM KALANGAN KELOMPOK TANI KOKO MALAYSIA

Oleh

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Mac 2012

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Sumbangan Faktor Dinamik Kumpulan (FDK) adalah penting dalam pembangunan kelompok. Namun sejauh mana pengaruhnya terhadap Kelompok Tani Koko (KTK) Malaysia dalam Penerimaan guna Teknologi koko masih belum dikaji dengan lebih mendalam. Kajian ini bertujuan untuk melihat kesan FDK terhadap Penerimaan guna Teknologi dalam kalangan KTK Malaysia. Objektif utama kajian ini adalah untuk mengenal pasti FDK yang mempengaruhi kejayaan dalam penerimaan guna teknologi koko di kalangan KTK Malaysia di bawah program pembangunan koko Lembaga Koko Malaysia (LKM). Di samping itu kajian ini juga melihat faktor yang membezakan antara KTK yang berjaya dan kurang berjaya.

Pendekatan yang digunakan dalam kajian ini melibatkan pengumpulan data secara sistematik daripada 136 sampel KTK di Malaysia yang melibatkan

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seramai 681 ahli KTK. Kaedah persampelan rawak berstrata digunakan dalam kajian ini. Data yang dikaji adalah FDK yang melibatkan himpunan unit-unit individu dalam kelompok yang bersatu membentuk satu keadaan yang kompleks dan menyeluruh. FDK telah dibahagikan kepada tiga kompenen yang terdiri dari input individu (demografik), input dalaman kelompok dan input luaran (keupayaan koordinasi Agen Pengembangan). Analisis Regresi Berganda digunakan dalam kajian ini bagi meramal faktor penyumbang utama dalam kejayaan penerimaan guna teknologi dalam kalangan KTK. Manakala analisis *discriminant* pula digunakan bagi menentukan faktor yang membezakan di antara KTK yang berjaya dan kurang berjaya.

Hasil kajian membuktikan bahawa FDK jelas memberi sumbangan terhadap kejayaan sesebuah kelompok tani. Antara FDK yang menjadi penyumbang utama dalam ST adalah tarikan keahlian, kepadatan bilangan KTK yang dijaga AP, pengalaman petani/ahli dalam tanaman koko dan penglibatan ahli dalam KTK. Kajian juga menunjukkan bahawa terdapat beberapa FDK yang berupaya membezakan dengan jelas KTK berjaya dan kurang berjaya.

Penemuan utama dalam kajian ini menunjukkan FDK berperanan dalam menyebarkan dan penerimaan guna teknologi secara meluas dalam kalangan KTK di Malaysia. Kajian ini memberikan kefahaman baru dalam teori kelompok tani yang mampu memberikan indikasi halatuju pembangunan kelompok tani koko. Hasil kajian ini dapat menyokong usaha LKM dalam merelisasikan prospek pembangunan koko secara berkelompok.

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I certify that a Thesis Examination Committee has met on 14th March 2012 to conduct the final examination of Philph @ Ramle Bin Kasin on his thesis entitled "Contribution of Group Dynamics Factors to Technology Adoption Among Malaysian Cocoa Farmer Clusters" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the degree of Doctor of Philosophy.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Doctor of Philosophy. The members of Supervisory Committee were as follow;

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DECLARATION

I declare that the thesis is my original work except for questions and citations which have been duly acknowledged. I also declare that it has not been previously, and is not or concurrently, submitted for any other degree at Universiti Putra Malaysia or other institutions.

_____

PHILPH @ RAMLE KASIN

Date: 14 March 2012

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LIST OF ABBREVIATIONS

CFC	:	Cocoa Farmers Cluster
DA	:	Discriminant Analysis
DV	:	Dependent Variable
EA	:	Extension Agent
EACA	:	Extension Agents Coordination Ability
GD	:	Group Dynamic
GDF	:	Group Dynamic Factor
IV	:	Independent Variable
LKM	:	Lembaga Koko Malaysia (Malaysian Cocoa Board)
MCB	:	Malaysian Cocoa Board
PBPS	:	Unit Pantai Barat & Pedalaman Sabah
PT	:	Unit Pantai Timur Sabah
RA	:	Regression Analysis
TA	:	Technology Adoption
Tech.	:	Technology
TOT	:	Transfer of Technology

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