

มหาวิทยาลัยเกษมบัณฑิต



บันทึกข้อความ

ที่ บธ. 04/17	วันที่ 12 มกราคม 2560
เรื่องขอเบิกค่าใช้จ่ายนำเสนอผลงานวิจัย	
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เนื่องจากการจัดงาน 3rd International Conference on Environment and Renewable Energy(ICERE 2017) ซึ่ง เป็นการประชุมทางวิชาการระดับนานาชาติ ปีนี้มีเจ้าภาพจัดงานคือ Institute of Energy and Economic Research of Hong Kong จัดงานที่ Boss Legend Hotel, Hanoi, Vietnam เดินทางนำเสนอระหว่างวันที่ 23-27 February 2017 ดิฉัน ได้ส่งผลงานวิจัยในนามมหาวิทยาลัยเกษมบัณฑิตในหัวข้อ "วิเคราะห์การเงินทางการตถาดจากพลังงานทดแทน" เรื่อง "Finance Analysis for of Renewable Energy Production with Contract Electricity Marketing using Panel Data Estimation Technique" ซึ่งผลการพิจารณาจากคณะกรรมการผู้ทรงคุณวุฒิระดับนานาชาติ ในแถบเอเชียได้กลั่นกรอง บทความวิจัยเรื่องนี้แล้วคือ บทความวิจัยได้ผ่านการพิจารณา นำเสนอแบบ Oral Present มีจำนวน 1 เรื่อง ดังนั้นจึง ขอเบิกค่าใช้จ่ายนำเสนอผลงานวิจัยมีดังนี้

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2.	2. ค่าเคินทางโดยเครื่องบิน สายการบิน Thai Air Line ถึงสนามบิน Noi Bai เที่ยวไป-กลับ		13,560	บาท
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Conference Introduction

The 2017 3rd International Conference on Environment and Renewable Energy (ICERE 2017) (http://www.icere.org/) will be held during February 25-27, 2017 in Hanoi, Vietnam. ICERE 2017 is sponsored by the Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEES). It is one of the leading international conferences for presenting novel and fundamental advances in the field of Environment and Renewable Energy. It also serves to promote scientific information interchange between researchers, developers, engineers, students, and practitioners working in Vietnam and abroad. The conference will be held every year to make it an ideal platform for people to share views and experiences in Environment and Renewable

Home What's New May 11, 2016, News! The 2017 conference will be held in Hanoi, Vietnam and the submission is open now. (Click) Call for Papers Echnology 28, 2016. News: The 2016 conference was successfully held in Ho Chi Minh City, and all the participants Important Dates enjoyed the visit in Biotechnology and Food Technology Institute, Ho Chi Minh city, Vietnam. (Click) Committees January 26, 2016, Nows! The 2016 program is available now. Suptember 15, 2015 Good News! Selected papers will be recommended to the Journal Water Conservation Paper Submission Registration Science and Engineering (ISSN: 2364-5687 under Springer). (Click) Conference Program August 3d 2015 News The 2016 ICERE will be held in Edenstar Salgon Hotel, (Click) Contact Us August 5, 2015, News! Let's welcome Assoc. Prof. Ahmad Zahedi, Head of Electrical & Computer Engineering School of Engineering & Physical Science, Queensland to be one of the keynote speaker of ICERE 2016. (Click) Publication July 10 2015 News! Let's welcome Prof. LE HUY BA, Chairman of The Science - Technology and Education Keynote Speakers council, University of Industry, Hochiminholty, Ho Chi Minh City, Vietnam to be one of the keynote speaker of Venue Information ICERE 2016. (Click) One Day Visit May 10 7015 News! The 2016 ICERE conference submission is open now. (Click) Conference History

Call For Papers

Topics of interest for submission include, but are not limited to:

Development and Utilization of Solar Energy **Environmental Chemistry and Biology** Power System and Automation Oil and Gas Well Development Projects Hydrogen and Fuel Cell

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System:

Plant Protection Clean Production Process Thermal Engineering Smart Grid Technologies **Energy Materials**

Submission Methods

Chair

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Contact Us

Conference Specialist: Ms. Mickie Gong









Notification of Acceptance

[ICERE 2017] 2017 3rd International Conference on Environment and Renewable Energy_ Hanoi, Vietnam

ICERE 2017 Paper Submission Office

25/December/2017

Dear Miss. Thanakorn Thiemudomlerk

Thank you for submitting full paper your for ICERE 2017

ICERE 2017 - The 3rd International Conference on Environment and.

Renewable Energy

www.icere.org/

The Industry Applications Society of the Institute of Electrical Engineers of Japan (IEEJ)

We are pleased to announce that your following is one full paper has been Accepted Notification for presentation at the conference ICERE 2017, Hanoi, Vietnam, will be held during 24-27 February 2017 by the Program Committee.

Ref. No.: 0030

Title of Paper:

"Finance Analysis for of Renewable Energy Production with Contract Electricity Marketing using Panel Data Estimation Technique"

Presentation type (Oral/Poster) and schedule will be announced after the review of manuscript.

Registration Requirement:

1.) All presenting authors are required to complete conference registration as either Participant or Student.

2.) ONE Participant payment (400 USD as Early Registration) authorizes to submit ONE full paper.

For one full paper submission, at least one author must register at Participant rate (not Student rate), even if all the authors are students.

3.) If an author is to submit more than one full paper, discounted rate (280 USD) will apply to second (or more) paper.

* For paper submissions ONLY. Items such as conference materials, lunch, banquet and others are NOT included.

The instruction for manuscript and online submission will be available in the middle of June. We will inform you when it is ready.

Please note that if the contents of your manuscript are markedly different from your abstract, your manuscript might be rejected after the review.

On-line registration will be available at the conference website in the end of final deadline on December 2016.

If we cannot confirm your registration by this deadline on 31 December 2016, the paper will be rejected.

All the authors can submit the conference papers to one of the following journals:

Journal of International Conference on Electric Machines and Systems
 IEEE Transactions on Industry Applications (selected papers only)

*Note that multiple submissions to these journals are prohibited.

Please feel free to contact the Paper Submission Office for any inquiries. We look forward to your participation.

Sincerely,

Conference Specialist: Ms. Mickie Gong Technical Program Committee Chairman of ICERE 2017 Professor of Department of Environment Engineering and Finance Economics, College of Engineering, Vietnam University

ICERE 2017 Paper Submission Office Phone: +852-35000-0137 (Hong Kong)

E-mail: icere@cbees.net

^{*} Contact information has been changed from December 2016.

Finance Analysis for of Renewable Energy Production with Contract Electricity Marketing using Panel Data Estimation Technique

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Abstract

This paper studies the finance economies for renewable energy production, divided into low, middle and high income economies and newly industrialized economies, using panel data estimation method. The power transmission line system is used as the growth variable, commercial bank credit to private sector per capita and electrical marketing capitalization per capita are used as finance variables, and interest rate spread and contract electrical market turnover value are used as instruments. Results from static panel analysis show that finance value at level has stronger growth enhancing effect than its lags, but electrical marketing has a stronger lagged effect than at levels. For dynamic panel method, the energy produced has growth enhancing effect only in high income economies using panel data estimation, but for electrical marketing enhances growth in almost all economies.

Keywords: Renewable energy, production, strategy, finance, SMEs businesses

1. Introduction

The literature of finance and growth relationship is abundant but they are mostly in cross sectional analysis or time series analysis. The studies using cross sectional data analysis, such as the work by King and Levine (in year 1992 and 1993) are subjected to several limitations. One limitation is that most of the cross sectional regression equations are based on specification that does not encompass a test for reverse causation that is justified by growth theory. The basic objective of Economic Dispatch (ED) of electric power generation is to schedule the committed generating unit outputs so as to meet the load demand at minimum operating cost while satisfying all unit and system equality and inequality constraints. This involves allocation of active power between the units, as the operating cost is insensitive to the reactive loading of a generator. The economic dispatch problem involves the solution of

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two different problems. The first of these is the unit commitment or pre-dispatch problem wherein it is required to select optimally out of the available generating sources to operate, to meet the expected load and provide a specified margin of operating reserve over a specified period of time. The second aspect of economic dispatch is the on-line economic dispatch wherein it is required to distribute the load among the generating units actually paralleled with the system in such a manner as to minimize the total economic cost of supplying the minute-to-minute requirements of the system.

2. Literature Review

There are many criticisms of the existing literature. One major criticism of these studies is that the data series are assumed to be stationary. Granger causality test is only valid for stationary series or cointegrated series. However, it is more likely that macroeconomic series are non-stationary in nature. Some writers did not perform any testing on cointegration and hence the validity of these results is doubtful [1]. Moreover, even if the two series are cointegrated, the causality result is only valid asymptotically. Some studies, in particular the earlier studies have very few observations and hence results based on the asymptotic theory cannot be expected to hold.

The electrical power generation system uses in this research comprise a DC motor, AC generator, fuzzy controller, control circuits and measurement circuit as shown in Fig.1. The fuzzy control system is developed run on the microcomputer to system control a DC motor and synchronous machine. The DC motor is the prime mover to electrical energy drive the AC generator (synchronous machine).

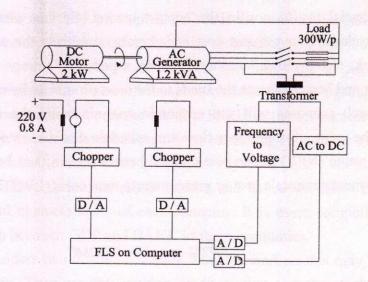


Fig.1. Block diagram of power generation with controller

More recently, there is energy production increasing empirical evidence that combines both the cross-sectional and time series data, known as panel data, to perform analysis on the relationship between finance and growth. Compared to cross sectional analysis, the panel analysis allows researchers to exploit the time series nature of relationship between finance and growth and can control for country specific effects and the potential endogeneity of explanatory variables. Among the different methodologies involving of panel system studies, the dynamic panel method by Arellano and Bond (1991) and the dynamic error correction model approach are most commonly used.

3. Finance Panel Data Estimation Technique

The theoretical discussion implies there are consider two distinct, yet complementary channels that financial development can influence economic growth. The first channel is based on the "debt accumulation" hypothesis by Gurley and Shaw (1955) and also by Bencivenga and Smith (1991). It focuses on the spread of organized finance at the expense of self-finance and the former's ability to overcome indivisibilities through the mobilization of unproductive resources. The second channel, sometimes called the "total factor productivity" channel, emphasizes the role of innovative financial technologies in ameliorating the informational asymmetries that hinder the efficient allocation of funds and the monitoring of the resulting projects. This is the idea considered by Greenwood and Jovanovic (1990) and King and Levine (1993b), among others. Thus the appropriate growth indicator must be able to reflect the level and efficiency effect of capital.

This study considers two distinct domestic financial markets that may have implications for economic growth. They are the banking credit market and the electrical market. In most developed and developing countries, commercial banks are the most important and most established financial institutions in the contact market. Besides channeling unproductive savings into productive investment cost and thereby augments the amount of capital, the commercial banks also evaluate loans applications, supervise the usage of the funds borrowed by the investors and hence allocate the funds to the most promising investment projects.

This research proposes will use economic analysis using the discounted cash flow technique for the value of money per time and schedule discount rate (%), when calculates the net present value (NPV) of the cost and the benefit stream then be compared with each other, the investment economic cost or present worth total costs (PWTC) is given by equation as follows:

$$PWTC = IC + PWOMC \tag{1}$$

where

IC is the initial cost to be occurred only once

AOMC is the cost of operation and maintenance per year. The benefit of all investor value

or present worth total benefit (PWTB) is given by equation as follows:

$$PWTB = AB \left[\frac{(1+r)^n - 1}{r(1+r)^n} \right]$$
 (2)

PWTB is the present value of benefits received by the investment per year with consider valve of the annual benefit, calculate the present value of benefits received, when a discount rate is 12 %. Criteria for the decision to invest all type benefit cost ratio (BCR) for operators as follows:

$$BCR = \frac{PWTB}{PWTC} \tag{3}$$

(4)

where

BCR > 1 case accepted an offer to invest

BCR < 1 case did not accept an offer to invest

BCR = 1 case if no effect occurs whether to accept or not accept an offer to invest

The economics cost of energy loss as follows:

Cost of Energy Loss (Baht) = Power maximum (kW) \times 8,760 \times Loss Factor \times the a of price electricity of buyer

4. Research Methodology

where GDP is the real GDP per capita, BANK is the commercial bank credit to private sector per capita, i refers to the cross-sections in each panel and t is the time period. The individual effect is αi , which is taken to be constant over time t and specific to the individual economy i in the grouping. The fixed effects approach takes αi to be a group specific constant term in the regression model. We use the variable SPRD as the instrument for BANK in the estimation. Although there are potential benefits of estimating economies with similar income level and closely related to each other geographically as a panel, we also recognize that different economies have their own characteristics and hence we allow the fixed effect to reflect the individual characteristics of each economy. It is more compelling to consider a constant relationship between GDP and BANK in these economies.

This study considers two distinct domestic financial markets that may have implications for economic growth. They are the banking credit market and the stock market. In most developed and developing countries, commercial banks are the most important and most established financial institutions in the credit market.

Theoretical analysis result to find elements expected to have influences on customer loyalty in this research divided the elements into 2 groups as follows.

First group: consists of contemporary elements resulting from adjustment of marketing concept and competitive environment of accounting firms business today including customer expectation in accuracy of financial statement and cost of changing the service.

Second group: contains old elements that are inside or outside factors of customers themselves which have impacts on customer loyalty including awareness of service quality, customer satisfaction, and customer confidence.

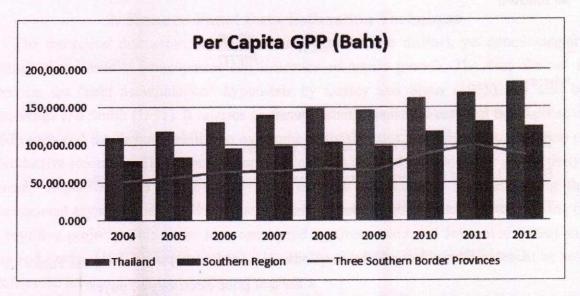


Fig. 2. The results of finance per capita GPP for marketing accountant businesses comparison are before south region and after 3 southern border in Thailand

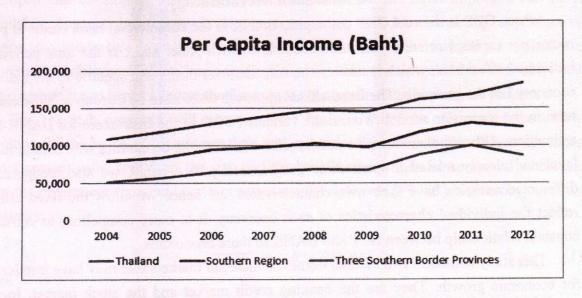


Fig. 3. The results of finance per capita income for marketing accountant businesses comparison are before south region and after 3 southern border in Thailand

From the finance results of panel data estimation technique method, the results analysis of the relationship between electrical market development and economic cost growth is again conditioned upon the existing income level, measured by lagged GDP as shown in Fig. 2 and Fig.3. As shown in the results, the coefficients for the lagged GDP for all the four panels are positive and significant up to 1% level. The magnitude of this coefficient is the largest for MIE, with a value of 0.87. For LIE, NIE and HIE the magnitudes of the coefficients are 0.82, 0.83 and 0.81 respectively, slightly smaller compared to MIE. The results again indicate that it is important to include the lagged GDP term in the study of electrical market development and finance economic growth. The effect of income levels on economies cost at different level of development is different, although the difference in magnitude is smaller compared to the bank credit market. Ignoring this effect will again bias the comparison of the causal effect between stock market development and economic cost growth between economies. The bias is positive and the research that ignores the existing state of development of economies cost again tends to overstate the importance of electrical market in economic growth.

5. Conclusion of the Research

We consider three estimation methods using two instruments in the panel data analysis. The first one is the static fixed effect at level, the second one is the static fixed effect with lags and the third one is the dynamic panel estimation method. The results with interest rate spread as the instrument for BANK shows that the level static growth enhancing effect is stronger than the lagged effect in all economies. When the dynamic effect is considered BANK has growth enhancing effect only in the high income economies. The results using stock market turnover value per capita as the instrument for stock market capitalization is different. It shows that the fixed effect of STOCK on the real GDP is stronger with lags than at level. But the dynamic panel method shows a positive and significant effect of STOCK on the real GDP in most of the finance economies.

The dynamic panel analysis also indicates that in studying the causal effect between bank credit market, stock market and economic growth, it is important to include the lagged GDP term to capture the effect of income levels on the economies. The research that ignores the existing state of development of economies is likely to have positive bias and over emphasize the importance of finance to economic growth. Overall, the results suggest that the development of stock market is important to the growth of economies, especially for low income economies.

6. References

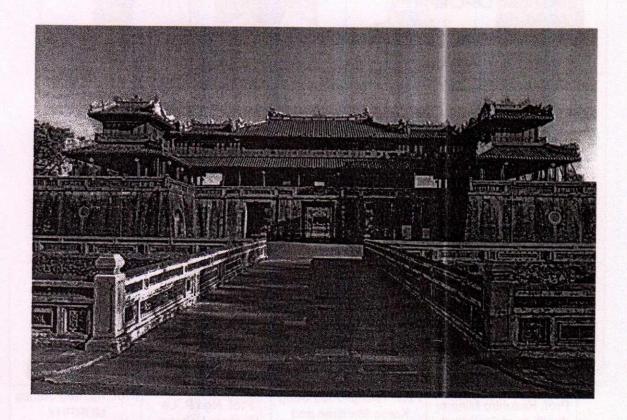
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2017 3rd International Conference on Environment and Renewable Energy

(ICERE 2017), 25-27 February 2017, Hanoi, Vietnam

Welcome to the official website of the 2017 3rd International Conference on Environment and Renewable Energy (ICERE 2017). It will be held during February 25-27, 2017 in Hanoi, Vietnam. ICERE 2017, is to bring together innovative academics and industrial experts in the field of Environment and Renewable Energy to a common forum.

The primary goal of the conference is to promote research and developmental activities in Environment and Renewable Energy. Another goal is to promote scientific information interchange between researchers, developers, engineers, students, and practitioners working in Hanoi, Vietnam and abroad. The conference will be held every year to make it an ideal platform for people to share views and experiences in Environment and Renewable Energy and related areas.



2017 3rd International Conference on Environment and Renewable Energy (ICERE 2017) is the premier forum for the presentation of new advances and research results in the fields of theoretical, experimental, and applied Environment and Renewable Energy. The conference will bring together leading researchers, engineers and scientists in the domain of interest from around the world. Topics of interest for submission include, but are not limited to:

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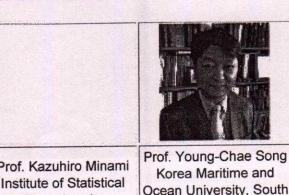
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