Schedule of Activities of the 37TH Federation of ASEAN Economic Associations Annual Conference

	Ν	ovember 28, 2	2012 (Wednesd	lay)	
9:30 a.m. OPENING CEREMO Venue: Summit Hal			10:30 a.m. PLENARY SESSION 1: Venue: Summit Hall E	Inclusive Growth in ASEAN 2, 4th Floor	
Opening and Welcome Remarks			Presentations	Narrowing the Development Divide in ASEAN: The Role of Policy Jayant Menon, Asian Development Bank	
Keynote Address	The Determinants and Long-ter of Saving Rates in Developing A Charles Horioka, Osaka Universit			Rogier van den Brink World Bank	
Open Forum			Open Forum		
12:00 L	.UNCH (Venue: Banquet Hall, 5t	h Floor)			
1:30-3:00 PARALI	LEL SESSIONS				
	PANEL I S FOR INCLUSIVE GROWTH eting Room 9, 3rd Floor		PANEL II ITAL MARKETS DEVELOPMI ing Room 10, 3rd Floor	PANEL III ENT COMPETITION POLICY Venue: Meeting Room 11, 3rd Floor	
The Viability of Industry in Industrial Cluster: Still Hopes for Growth Sri Indah Nikensari Jakarta State University		International Capital Flows and Labor Migration: The Malaysian Perspective Evelyn Devadason and Thirunaukarasu Subramaniam, University of Malaysia		n: Impact of Competition Policy on Merger Banks and Non-financial Firms in Indonesia Ni Nyoman Sawitri and Ludwina Harahap School of Business and Management, Jakarta	
International Regional Development: Recognizing Entrepreneurs' Needs and Perception Agusdin		Exchange Market Pressure and Degree of Intervention in Malyasia Saadiah Mohamad and Azlul Kalilah Zaghlol		Competition Law and Policy in the European Union: Some Lessons for Southeast Asia Lino Briguglio, University of Malta	
Matarram University The Role of Strategy and Business Environment on Firm's Resources-Performance Relationships:		Universiti Teknologi MARA Capturing the Linkages between Real and Financial Variables: A Global Projection Model for		European Union Competition Law: Innovation, Hypercompetition and Consumer Welfare William Clune, Economic Society of Singapore	
The Case of Indone Lena Ellitan Widya Mandala (the Philippines Ruperto Majuca and Joy Sinay National Economic and Development Authority		Learning from Exporting: Cambodia's Experient Chhair Sokty, Cambodian Economic Association	
Widya Mandala Catholic University The Role of Small and Medium Enterprises in Indonesia Didik J. Rachbini Indonesian Economists Association		Hedging Illiquidity Risk through Securitization: Evidence from Loan Commitments Neil Cabiles National Economic and Development Authority		Balancing Industrial Concentration and Competition for Economic Development in Asia Angelica Barcenas and Padmini Mahurkar	
	PANEL IV			PANEL V	
FOOD SECURITY AND THE ENVIRONMENT Venue: Meeting Room 12, 3rd Floor		SOCIAL PROTECTION MECHANISM Venue: Room D-301, 3rd Floor			
The Pattern of Food Security and Economic Crisis: Evidence on ASEAN 5 Countries Lukman Hakim		Activities in the	on Women's Participation in Economic Poorest Municipality of Camarines Sur wino-Gumba, Ateneo de Naga University		
Universitas Sebelas Maret Indonesia Jauhari Dahalan Universiti Utara Malaysia		The Case of Sing	Union Benefits as Part of the Inclusive Growth Strategy: The Case of Singapore Chew Soon Beng and Aaron Neo		

Economic Risk Analysis of Alternative Farming Systems for Smallholder Farmers in Central and Northeast Thailand Satit Aditto, Khon Kaen University

Satit Aditto, Khon Kaen University Christopher Gan and Gilbert Nartea Lincoln University, New Zealand

The Strategy of Rice Price Stabilization in Indonesia Wijoyo Santoso, Nurhemi and Guruh Suryani Bank Indonesia

3:00 COFFEE BREAK

4:00 FAEA BOARD MEETING

5:00 CULTURAL TRIP: Tour of the Bangko Sentral ng Pilipinas Museum

6:30 WELCOME DINNER RECEPTION (hosted by the Bangko Sentral ng Pilipinas)

Chew Soon Beng and Aaron Neo Nanyang Technological University/ Economic Society of Singapore



Schedule of Activities of the 37TH Federation of ASEAN Economic Associations Annual Conference

November 29, 2012 (Thursday)

	November 29, 2	012 (Thursday)	
9:30 a.m. OPENING CEREMONIES Venue: Summit Hall D 4th Floor		10:30 a.m. PLENARY SESSION 2: Regional Integration Venue: Summit Hall D,	o of Financial and Capital markets in ASEAN 4th Floor
Opening and Peter Lee U Welcome Remarks PES President		Presentation	s Diwa Guinigundo Bangko Sentral ng Pilipinas
Keynote Shanaka Jayana Address International Mo Open Forum			Going Regional: How to Deepen ASEAN'S Financial Market Eli Remolona Bank for International Settlements
			Hans Sicat Philippine Stock Exchange
		Open Forun	n
12:00 LUNCH (Venue: West Banquet 1:30 - 3:00 PARALLEL SESSIONS	,		
PANEL I MICRO SMES FOR INCLUSIVE GROWT Venue: Meeting Room 12, 3rd Floo The Impact of Global Financial Crises on SM Evidence from Indonesia Economy Tri Winarno Central Bank of Indonesia SMEs Access to Finance in the Philippines Rafaelita Aldaba Philippine Institute for Development Studie The Performance of Indonesia's Textile Indu Bernadette Robiani University of Sriwijaya	H FINANCIAL AND (DEVEL) Venue: Meeting F Es: Explaining Growth and C Micro-finance Industry of Jovi Dacanay University of Asia and the Are there Rational Spector ASEAN Stock Markets? Gilbert Nartea, Bo Hu a Lincoln University The Impacts of Microcree	f the Philippines he Pacific Ilative Bubbles in and Baiding Hu dit on Poverty Reduction:	PANEL III FOOD SECURITY AND THE ENVIRONMENT Venue: Room D-301, 3rd Floor Analysis of the Implication of Contract for the Survival of Eucalyptus Oil Business in the Regency of Buru Hayati Hehamahua, Iqro University, Buru Maluku Price Formation of Red Chili in Indonesia Wijoyo Santoso, Sri Liani Suselo, Felicia Barus ar Gurun Suryani, Bank Indonesia Investigating Agricultural Productivity Improvements in Transition Economies Supawat Rungsuriyawiboon
Promoting Innovation Activities in Vietnam SMEs: The Role of Local Research Institutes Vinh Tuong Phi Vietnam Institute of Economics		an Rural Villages	Thammasat University Multi-market Modeling of Agricultural Supply when Crop Land is a Quasi-fixed Input: A Note Roehlano M. Briones Philippine Institute for Development Studies
	PANEL IV DTECTION MECHANISM ing Room 11, 3rd Floor	SOCIAL PROTECT	NEL V FION MECHANISM II ; Room 9, 3rd Floor
Social Protection in Informal Sector in Thailand Yongyuth Chalamwong Thailand Development Research Institute		Main Findings of the Par Impact Evaluation Study Junko Onishi	
Participate in Econo Agnes Banzon and		The World Bank	555 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Materialism and Sat Emerging Urban Vie Nguyen Thi Tuyet	isfaction with Life: A Study of thamese Consumers		An investigation of the second s

The Pattern of Food Security and Economic Crisis:

Evidence on ASEAN 5 Countries

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Abstract

The relationship of food security and the economic crisis is an important issue in today's development discourse. The view that the food security of the prime would be able to withstand the economic crisis still need to be proven by the state. This research will discover patterns and relationships between food security and the economic crisis to growth in the ASEAN 5. Data for the economic crisis will be using Exchange Market Pressure (EMP), while data on Food Security Index (FSI) will be proxy of food production index (FPI), an index of crop production (CPI) and livestock production index (LPI). All three indexes is important to look at each country's food security related to macroeconomic variables and economic crisis. The method will be used in this study is a panel data analysis and Vector Error Correction Model (VECM). Based on results of impulse response analysis of VECM model results found that Indonesia and the Philippines have the same pattern of the food security variable (FSI) is more influential than the crisis variable (EMP). Meanwhile, in Malaysia, Singapore and Thailand show that the crisis variable (EMP) is much stronger effect than on food security (FSI). But on the panel data analysis showed that relationship between the crisis index (EMP) against growth is negative, but food security (FSI) to growth is positive.

Keyword: Food Security, Economic Crisis, VECM and Panel Data

Introduction

The relationship of food security, growth and the economic crisis is an important issue in development discourse. The view that the food security of the prime would be able to withstand the economic crisis still need to be proven by the state (Timmer, 2009 & 2011). The view that the food security of the prime would be able to withstand the economic crisis still need to be proven by the state.

This research will discover patterns and relationships between food security and the economic crisis to growth in the ASEAN 5. Data for the economic crisis will be using Exchange Market Pressure (EMP), while data on Food Security Index (FSI) will be proxy of food production index (FPI), an index of crop production (CPI) and livestock production index (LPI). All three indexes are important to look at each country's food security related to macroeconomic variables and economic crisis (Fangquan(2002).

Meanwhile, separately, Girton & Roper (1977) is also developing an indicator of the economic crisis called the EMP, which is the sum of foreign exchange reserves and real exchange rates. Connolly & Silveira (1979) develop the economic crisis model with EMP as the dependent variable, whereas the independent variable is domestic credit, GDP and prices. Burdekin & Burkett (1990) and Tanner (2001) explore the EMP and BOP model to explain global economic crisis in 1990s and 2000s. Therefore this study will examine the relationship between the FSI and the EMP model to the growth is applied to ASEAN 5 countries.

Methodology

Vector Error Correction Model (VECM)

Vector Autoregression (VAR) or Vector Error Correction Model (VECM) was introduced as an alternative approach to multi-equation modeling. VAR makes minimal theoretical demands on the structure of the model (Sims, 1980a b). Characteristic of VAR/VECM are (1) the all variables are endogenous that are believed to interact and that hence should be included as part of the economic system one is trying to model and (2) the largest number of lags needed to capture most of the effect that variables have on each other (Pindyck and Rubinfeld, 1998).

$$x_t = A_0 + A_1 x_{t-1} + A_2 x_{t-2} + \dots + A_p x_{t-p} + e_t$$
(13)

where

 x_t = an (n x 1) vector containing each of the n variables included in the VAR

 A_0 = an (n x 1) vector of intercept term

 $A_i = (n \times n)$ matrices of coefficients

 e_t = an (n x 1) vector of error term

VAR have two tools of estimation are impulse response and variance decomposition. Impulse response formula is a vector stochastic process x of a VAR / VECM model can be expressed as

$$\mathbf{x}_{t} = \sum_{s=0}^{\infty} \mathbf{A}_{s} \mathbf{e}_{t-s}$$

where $e_t = x_t - E(x_t | x_{t-1}, x_{t-2}, ...)$ then choose given B is a diagonal matrix and Bet has a diagonal covariance matrix, such that C = AB⁻¹ and f=Be, therefore

(14)

$$x_t = \sum_{s=0}^{\infty} C_s f_{t-s} \tag{15}$$

The coefficient C is the reported as "responses to innovations" or impulse response. Meanwhile, variance decomposition formula is the variance-covariance matrix of $x_t - E(x_t | x_{t-1}, x_{t-2}, ...)$, with k period-ahead forecast of x and is given as

$$V_k = \sum_{s=0}^k C_s Var(f_t) C_s'$$

Sims' methodology entails little more than a determination of the appropriate variables to include in the VAR and a determination of the appropriate lag length. The variables to be included in the VAR are selected according to the relevant economic models. Lag-length test select the appropriate lag length with many information criteria approaches like Akaike information criteria (AIC), Schwarz criterion (SC), and Hannan-Quinn criteria (HQ).

The issue of whether the variables in VAR need to be stationary exists. According Sims (1980a) and Doan (1992) recommend against differencing even if the variables contain a unit root. They argue that the goal of VAR analysis is to determine the interrelationships among the variables, not the parameter estimates. The main argument against differencing is that it "throws away" information concerning the comovements in the data such as the possibility of cointegrating relationships (Enders, 1995).

Panel Data

Panel data refers to pooling observation for *N* a cross section (e.g. countries, households, firms, individuals, etc.) over several *T* time periods (e.g. annually, quarterly, monthly, etc.). According to Baltagi (2003) explore several benefits of panel data. First, panel data can be controlling for individual heterogeneity usually panel data suggest that individuals, firms, states or countries are heterogeneous. Time-series and cross-section studies no controlling for this heterogeneity run the risk of obtaining biased result. Second, panel data give more informative data, more variability, less collinearity among the variables, more degree of freedom and more efficiency. Time series studies are plagued with multicollinearity. Third, panel data are better able to study the dynamics of adjustment. Cross sectional distribution that look relatively stable hide a multitude of change. Spells of unemployment, job turnover, residential and income mobility are better studied with panels. Panel data are also well suited to study the duration of economic states like unemployment and poverty, and if these panels are long enough. Fourth, panel data models allow us to construct and test more complicated behavioral models than purely cross-section or pure time data. Sixth, panel data are usually gathered on micro units, like individual, firms and households. Many variables can be more accurately measured at the micro level, and biases resulting from aggregation over firms or individuals are eliminated.

Meanwhile, according to Baltagi (2003) exhibits several limitations of panel data method. First, design and data collection problems include problems of coverage (incomplete account of the population of interest), non response (due to lack of cooperation of the respondent or because of interviewer error), recall (respondent not remembering correctly), frequency of interviewing, interview spacing, reference period, the use of bounding and time in sample bias. Second, short time series dimension problem because typical panels involve annual data covering a short span of time for each individual. This means that asymptotic argument rely crucially on the number of individual tending to infinity. Increasing the time span of the panel is not without cost either. In fact, this increase the chances of attrition and increases the computational difficulty for limited dependent variable panel data model.

The basic framework of the panel data is a regression model of the form

$$Y_{it} = \alpha_i + \beta X_{it} + u_{it} \tag{17}$$

Where the variables Y and X have both *i* and *t* subscripts for i = 1, 2, ..., N sections and t = 1, 2, ..., T time periods. The data set is called *balanced* if nest data both across section and across time is full. Otherwise, when observations are missing for the time periods of some of the cross sectional units then the panel is called *unbalanced*.

In general panel data divide two approach are static and dynamic model. In the static model consist of a common constant, fixed effect and random effect. The following will explain one by one:

The Common Constants Method

The common constants method also called the pooled OLS method as in equation (17). The assumption of the model are no differences among the data matrices of the cross sectional dimension (N). In others words the model estimates a common constant a for all cross sections or commons constant for countries.

(16)

Practically, this method implies that there are no differences between the estimated cross section and it is useful under the hypothesis that the data set is a priori homogeneous. However, this case is quite restrictive and case of more interests involving the inclusion of fixed and random effects in the method of estimation (Asteriou & Hall, 2007).

The Fixed Effects Method

According to Asteriou & Hall (2007), in the fixed effects method, the constant is treated as group or section specific. This means that the models allows for different constants for each group. The effects estimator is also known a the least squares dummy variables (LSDV) estimator because in order to allow for different constants for each group, it includes a dummy variable for each group. To understanding this better consider the following model:

$$Y_{it} = a_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots + \beta_k X_{kit} + u_{it}$$
(18)

which can be written in a matrix notation as:

$$Y = D_{\alpha} + X\beta' + u \tag{19}$$

where the dummy variable (*D*) is the one that allow us to take different group-spesifc estimates for each of the constants for every different section. The standard F-test can be used to check fixed effect against the simple common constants OLS method.

The Random Effect Method

According to Asteriou & Hall (2007), the random effect method is an alternative method of estimating a panel data model. The difference between the fixed effect and the random effects method is that the latter handles the contains for each section not as fixed, but as random parameters. Hence the variability of the constant for each section comes from the fact that:

$$a_i = a + v_i \tag{20}$$

where v_i is zero mean standard random variable. The random effect model takes the following form:

$$Y_{it} = (a + v_i) + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots + \beta_k X_{kit} + u_{it}$$
(21)

$$Y_{it} = a + \beta_1 X_{1it} + \beta_1 X_{1it} + \dots + \beta_k X_{kit} + (v_i + u_{it})$$
(22)

In general, the difference between the two possible ways of testing panel data models is this the fixed effect model assume that each country differs in its intercept term, whereas the random effect assume that each country differs in its error term. Usually, when the panel is balanced or contains all existing cross sectional data, one might expect that the fixed effects model will work best. In other case, where the sample contains limited observations of the existing cross sectional units, the random effect model might be more appropriate. In the random effect model used to the Breusch-Pagan test is the counterpart to the F-test.

In making a choice between the fixed effect and random effect approaches used to the Hausman tests. This test investigates whether random effect estimation could be almost good. Thus we actually test H_o , that random effects are consistent and efficient, versus H_1 that random effects are inconsistent, as the fixed effect will be consistent. A large value of the Hausman statistic, so we reject the null hypothesis that the random effect

Data

The data used for estimating the model on each country in this study consist of annually observations for the period of 1981 to 2009. In this research used to three data are exchange market pressure (total reserves + real exchange rate), GDP riel, food security index (FSI). All data is processed is the growth data. The all data source are taken from the world bank and International Financial Statistic (IFS) International Monetary Fund (IMF). Year of 1981 is chosen as the beginning of the sample, because this year is the milestone of implementation of the financial liberalization in ASEAN-5 countries.

Results and Analysis

VAR

As described above this research uses growth data, all data are stationary in levels, so the data does not need to be derived again. By using the AIC and SC to get the optimal lag for the VECM model is estimated lag 2 for all countries. Based on results of impulse response analysis of VECM model results found that Indonesia and the Philippines have the same pattern of the food security variable (FSI) is more influential than the crisis variable (EMP). Meanwhile, in Malaysia, Singapore and Thailand show that the crisis variable (EMP) is much stronger effect than on food security (FSI).

Panel Data

Results of panel data models indicate that economic crisis (EMP) a significant test of his t test in both the PLS model, Fixed Effects, and Random Effect. Even more encouraging that the results show a negative relationship between economic crisis (EMP) against growth, but food security (FSI) to growth is positive.

Conclusion

Based on studies using either VECM or panel data model shows that the role of food security is an important factor to increase the growth for the ASEAN 5 countries. This conclusion is in accordance with the theory that emphasizes that the relationship of food security on the growth is positive. In other words, food security is the important factor to overcome the global crisis that plagued developing countries.

References

Asteriou, D & Hall, S.G (2007). Applied Econometrics: A Modern Approach. New York: Palgrave Macmillan.

Baltagi, B. (2003). Econometric Analysis of Panel Data. Chichester: John Wiley & Sons.

- Behnassi, M, Draggan, S dan Yaya, S. (2011). Global Food Insecurity: Rethinking Agricultural and Rural Development Paradigm and Policy. London: Springer.
- Burdekin, R.C.K. & Burkett, P. (1990). "A Re-Examination of the Monetary Model of Exchange Market Pressure: Canada, 1963-1988." *The Review of Economics and Statistics*, 72 (4): 677-681.
- Connolly, M & Silveira, J.D. (1979). "Exchange Market Pressure in Postwar Brazil: An Application of the Girton-Roper Monetary Model." *The American Economic Review*, 69(3): 448-454.

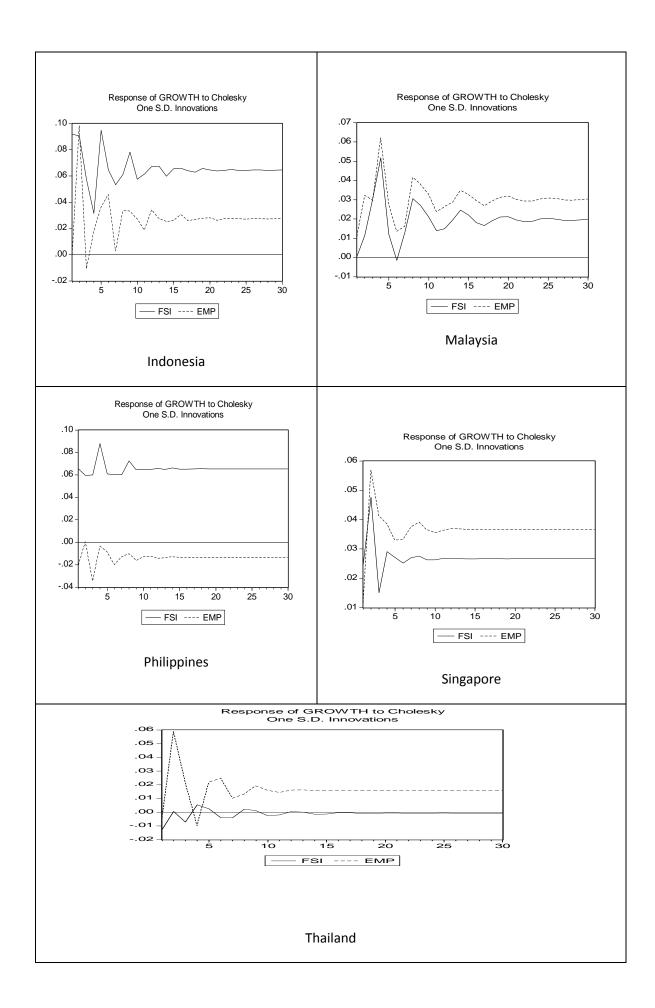
Enders, W (1995). Applied Econometric Time Series. Denver: John Wiley & Sons.

- Falcon, W, P. & Naylor, R. L. (2005). Rethinking Food Security For The 21st Century. American Journal of Agricultural Economics. 87 (5), 1113-1127.
- Fangquan, M. (2002). A Study on China's Grain and Food Security and Early Warning System. Working Paper, Institute of Information MOA, China.
- Girton L. & Roper, D. (1977). "A Monetary Model of Exchange Market Pressure Applied to the Postwar Canadian Experience." *The American Economic Review*, 67 (4): 537-548.
- Guha-Khasnobis, B, Acharya S.S, dan Davis, B. (2007). Food Security Indicators, Measurement, and the Impact of Trade Openness. New York: Oxford University Press.

- Hayami, Yujiro, dan Vernon Ruttan. (1985) Agricultural Development: An International Perspectives. London: John Hopkins University Press
- Kaminsky, G. L. & Reinhart C. (1999). The Twin Crises: The Causes of Banking and Balance-of-Payments Problems, *The American Economic Review*, 89(3), 473-500

Kaminsky, G. L. & Reinhart C. (2000). On crises, contagion, and confusion. Journal of International Economics, 51 145-168

- Naylor, R. L. & Falcon, W. P. (2010). Food ecurity in n Era of Economic Volatility. *Population and Development Review* 36(4):693-723
- Shaw, D.J (2007). World Food Security A History Since 1945. New York: Palgrave Macmillan.
- Sims, C.A. (1980a). Macroeconomic and Reality. Econometrica, 48 (1), 1-48.
- Sims, C.A. (1980b). Comparison of Interwar and Postwar Business Cycles: Monetarism Reconsidered. *American Economic Review*, 70, 250-257.
- Tanner, E. (2001). "Exchange Market Pressure and Monetary Policy: Asia And Latin America In The 1990s." IMF Staff Papers 47(3):311-333.
- Timmer C. P. (2004a) Food Security and Economic Growth: an Asian Perspective Presented at Heinz W. Arndt Memorial Lecture, Canberra, November 22.
- Timmer, C. P, Falcon, W.P, Pearson, S.R (1983). *Food Policy Analysis*. London: World Bank and The John Hopkins University Press.
- Timmer, C. P. (2004b). Food Security in Indonesia: Current Challenges and the Long-Run Outlook. Center for Global Development, Working Paper Number 48.
- Timmer, C. P. (2007). The Structural Transformation and the Changing Role of Agriculture in Economic Development: Empirics and Implications. Presented at Wendt Lecture, American Enterprise Institute Washington, DC October 30.
- Timmer, C.P. (2009) Supermarkets, Modern Supply Chains, and the Changing Food Policy Agenda. Center for Global Development Working Paper No.162
- Timmer, C.P. (2011). Managing Price Volatility: Approaches at the Global, National, and Household Levels. Presented at Stanford Symposium Series on Global Food Policy and Food Security in the 21st Century. Center on Food Security and the Environment.
- Warr, P. (2011). Food Security vs. Food Self-Sufficiency: The Indonesian Case. Australia National University (ANU) Working Paper No. 2011/04.



B. Panel Data Results

Dependent Variable: GROWTH?

Method: Pooled Least Squares

Date: 10/15/12 Time: 02:29

Sample: 1981 2009

Included observations: 29

Cross-sections included: 5

Total pool (balanced) observations: 145

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.051796	0.010893	4.755174	0.0000
EMP?	-0.115954	0.025037	-4.631333	0.0000
FSI?	0.023615	0.095932	0.246168	0.8059
Fixed Effects (Cross)				
_INAC	-0.026254			
_MALC	0.013685			
_PHILC	-0.043299			
_SINGC	0.045284			
_THAIC	0.010584			

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.213759	Mean dependent var	0.029389
Adjusted R-squared	0.179575	S.D. dependent var	0.125521
S.E. of regression	0.113694	Akaike info criterion	-1.463549
Sum squared resid	1.783818	Schwarz criterion	-1.319845
Log likelihood	113.1073	Hannan-Quinn criter.	-1.405157
F-statistic	6.253133	Durbin-Watson stat	1.430933
Prob(F-statistic)	0.000008		

Dependent Variable: GROWTH?

Method: Pooled EGLS (Cross-section random effects)

Date: 10/15/12 Time: 02:40

Sample: 1981 2009

Included observations: 29

Cross-sections included: 5

Total pool (balanced) observations: 145

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.		
С	0.055434	0.010825	5.121130	0.0000		
EMP?	-0.128413	0.024718	-5.195136	0.0000		
FSI?	-0.030102	0.092361	-0.325911	0.7450		
Random Effects (Cross)						
_INAC	0.000000					
_MALC	0.000000					
_PHILC	0.000000					
_SINGC	0.000000					
_THAIC	0.000000					
Effects Specification						
			S.D.	Rho		
Cross-section random			0.000000	0.0000		
Idiosyncratic random			0.113694	1.0000		
	Weighted	Statistics				
R-squared	0.154311	Mean depend	dent var	0.029389		
Adjusted R-squared	0.142400	S.D. depende	ent var	0.125521		
S.E. of regression	0.116241	Sum squared resid		1.918694		
F-statistic	12.95522	Durbin-Watson stat		1.327342		
Prob(F-statistic)	0.000007					
	Unweighter	Statistics				
	enneightet					
R-squared	0.154311	Mean depend	dent var	0.029389		

Correlated Random Effects - Hausman Test

Pool: FIXED

Test cross-section random effects

Test Summary

Chi-Sq. Statistic Chi-Sq. d.f. Prob.

Cross-section random	9.843454	2	0.0073
	0.010101	~	0.0070

** WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
EMP?	-0.115954	-0.128413	0.000016	0.0018
FSI?	0.023615	-0.030102	0.000672	0.0383

Cross-section random effects test equation:

Dependent Variable: GROWTH?

Method: Panel Least Squares

Date: 10/15/12 Time: 02:41

Sample: 1981 2009

Included observations: 29

Cross-sections included: 5

Total pool (balanced) observations: 145

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.051796	0.010893	4.755174	0.0000
EMP?	-0.115954	0.025037	-4.631333	0.0000
FSI?	0.023615	0.095932	0.246168	0.8059

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.213759	Mean dependent var	0.029389
Adjusted R-squared	0.179575	S.D. dependent var	0.125521
S.E. of regression	0.113694	Akaike info criterion	-1.463549
Sum squared resid	1.783818	Schwarz criterion	-1.319845
Log likelihood	113.1073	Hannan-Quinn criter.	-1.405157
F-statistic	6.253133	Durbin-Watson stat	1.430933
Prob(F-statistic)	0.000008		