THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN ASIAN COUNTRIES

NUR HIDAYAH BINTI SUKERY

MASTER OF SCIENCE FINANCE
UNIVERSITI UTARA MALAYSIA
2017

THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN ASIAN COUNTRIES

By
NUR HIDAYAH BINTI SUKERY

Research Paper Submitted to
School of Economics, Finance and Banking,
Universiti Utara Malaysia,
in Partial Fulfillment of the Requirement for the
Master of Science (MSc) Finance

Pusat Pengajian Ekonomi, Kewangan dan Perbankan
SCHOOL OF ECONOMICS, FINANCE, AND BANKING
Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PENYELIDIKAN
(Certification of Research Paper)

Saya, mengaku bertandatangan, memperakukan bahawa
(I, the undersigned, certified that)
NUR HIDAYAH SUKERY (821020)

Calon untuk Ijazah Sarjana
(Candidate for the degree of)
MASTER OF SCIENCE (FINANCE)

telah mengemukakan kertas penyelidikan yang bertajuk
(has presented his/her research paper of the following title)

THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN ASIAN COUNTRIES

Seperti yang tercatat di muka surat tajuk dan kulit kertas penyelidikan
(as it appears on the title page and front cover of the research paper)

Bahawa kertas penyelidikan tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.
(that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the dissertation).

Nama Penyelia (Name of Supervisor) : **Dr. Sharmilawati Sabki**

Tandatangan (Signature) :

Tarikh (Date) : **28 Disember 2017**

DECLARATION

I declare that thesis work described in this research paper is my own work (unless otherwise acknowledged in the text) and that there is no previous work which has been previously submitted for any academic Master's program. All sources quoted have been acknowledged by reference.

Signature : ______________________

Name : Nur Hidayah Binti Sukery

Date : 28th December 2017

PERMISSION TO USE

In presenting this dissertation in partial fulfillment of the requirement for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this dissertation in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or in their absence, by the Dean of School of Economic, Finance and Banking where I did my dissertation. It is understood that any copying or publication or use of this dissertation parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my dissertation.

Request for permission to copy or to make other use of materials in this dissertation in whole or in part should be addressed to:

Dean of School of Economics, Finance and Banking
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman

ABSTRACT

FDI is an investment from the international organizations and individual investors in the host countries to acquire the control on the invested firms and return. In theory, FDI stimulates economic development and improve the well-being of societies. The objectives of this study are to determine the effect of economic growth, inflation, exchange rate, interest rate and financial development on FDI inflows in 26 Asian countries for the duration of 16 years (2000 to 2015). The dependent variable is the FDI net inflows meanwhile the independent variables are economic growth, inflation, exchange rate, interest rate and financial development. This study finds a positive link between financial development and FDI inflows in the 26 Asian countries. This implies that a sound financial development would allow easier accessibility to the international financial market and thereby attract more foreign investors in the domestic financial system, hence improves the FDI inflows in the host country. Moreover, inflation has found to accelerate the FDI inflows while higher economic growth dampens the level of international funds flowing into the host countries. In addition, this study discovers that exchange rate and interest rate are not significant in influencing the inflows of FDI. Thus, this study will assist the policy makers in improving and monitoring the current regulations on the FDI inflows.

Keywords: FDI Inflows, Economic Growth, Inflation, Exchange Rate, Interest Rate, Financial Development.

ABSTRAK

FDI adalah pelaburan dari organisasi antarabangsa dan pelabur individu di negara tuan rumah untuk memperoleh kawalan ke atas syarikat yang dilaburkan dan pulangan. Secara teori, FDI merangsang pembangunan ekonomi dan meningkatkan kesejahteraan masyarakat. Objektif kajian ini adalah untuk mengkaji kesan pertumbuhan ekonomi, inflasi, kadar pertukaran, kadar faedah dan pembangunan kewangan ke atas aliran masuk FDI di 26 negara Asia untuk tempoh 16 tahun (2000 hingga 2015). Pemboleh ubah bergantung adalah aliran masuk bersih FDI sementara itu pembolehubah bebas adalah pertumbuhan ekonomi, inflasi, kadar pertukaran, kadar faedah dan pembangunan kewangan. Kajian ini mendapati hubungan positif antara pembangunan kewangan dan aliran masuk FDI di 26 negara Asia. Ini menujukkan bahawa pembangunan kewangan yang kukuh akan mempermudahkan akses ke pasaran kewangan antarabangsa dan dengan itu menarik lebih banyak pelabur asing dalam sistem kewangan domestik dan meningkatkan aliran masuk FDI di negara tuan rumah. Tambahan lagi, inflasi telah ditemui dapat mempercepat aliran masuk FDI sementara pertumbuhan ekonomi yang tinggi dapat melemahkan tahap dana antarabangsa yang mengalir ke negara-negara tuan rumah. Di samping itu, kajian ini mendapati bahawa kadar pertukaran dan kadar faedah bukanlah penentu aliran masuk FDI. Oleh itu, kajian ini akan membantu penggubal undang undang dalam memantau undang undang semasa mengenai aliran masuk FDI.

Kata kunci: Aliran masuk FDI, Pertumbuhan Ekonomi, Inflasi, Kadar Pertukaran, Kadar Faedah, Pembangunan Kewangan.

ACKNOWLEDGEMENT

In the Name of Allah, the Most Forgiving and the Most Merciful

All praise belongs to Allah whom we worship. I would first like to extent my deepest gratitude and thanks to Allah the Almighty for giving me excellent health, energy, and capability to complete my thesis.

Special thanks to my beloved parents Sukery Ahmad and Hashimah Abdullah who never stop praying for my success, providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. This accomplishment would not have been possible without them.

My deepest appreciation goes to my academic supervisor, Dr. Sharmilawati Binti Sabki. The door to her office was always open whenever I ran into a trouble spot or had a question about my research or writing. She consistently allowed this paper to be my own work, but steered me in the right the direction whenever she thought I needed it.

I also wish to acknowledge my friends especially Norlida, Shuhada, Nurnina, Hamizah and other lecturers in Universiti Utara Malaysia. Without their endless assistance, attention, care, encouragement, and sacrifice, it would have been hard for me to complete this study.

Finally, I wish to thank all individuals and institutions that have directly or indirectly contributed toward the completion of my Master dissertation.

May Allah bless and may Allah ease everything for you all.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURE

LIST OF ABBREVIATIONS

Abbreviation		**Meaning**
FDI	=	Foreign Direct Investment
GDP	=	Gross Domestic Product
CPI	=	Consumer Price Index
INF	=	Inflation
OER	=	Official Exchange Rate
INT	=	Interest Rate
FD	=	Financial Development
USD	=	United States Dollar

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Foreign direct investment (FDI) is defined as an objective of creating a lasting interest by a direct investor in an enterprise and economy which is other than investor's country. The lasting interest here indicates that a long term relationship exists between direct investors and the enterprise with the significant degree of influence on the enterprise's management (OECD, 2008). FDI is considered to be an important economic factor because it stimulates economic development and improve the well-being of societies (Ali & Hussain, 2017; Pandya & Sisombat, 2017; Zekarias, 2016). Moreover, with a proper policy framework, FDI can offer financial stability to the participated countries because it is considered to be an important driver of the international economic integration (OECD Report, 2008).

Main components of FDI are debt instruments and equity. Debt instruments include bonds, non-participating preference shares, promissory notes, debentures and commercial paper. In addition, the instruments also comprise of other tradable non-equity securities, trade credit, accounts payable, account receivable, deposits and loans. Meanwhile, equity includes preferred shares, common shares, reinvestment of earnings, reserves and capital contributions.

The contents of the thesis is for internal user only

REFERENCES

Aaron, C. (1999). The contribution of FDI to poverty alleviation. Singapore: The Foreign Investment Advisory Service.

Abolghasemi, S. M. S. (2014). Determinants of foreign direct investment in Germany (Doctoral dissertation, Eastern Mediterranean University (EMU)-Doğu Akdeniz Üniversitesi (DAÜ).

Alam, A., & Shah, S. (2013). Determinants of foreign direct investment in OECD member countries. *Journal of Economic Studies*, *40*(4), 515-527.

Ali, N., & Hussain, H. (2017). Impact of foreign direct investment on the economic growth of Pakistan. *American Journal of Economics*, 7(4), 163-170.

Alshamsi, K., Hussin, M., & Azam, M. (2015). The impact of inflation and GDP per capita on foreign direct investment: The case of United Arab Emirates. *Investment Management and Financial Innovations*, 2(3), pp. 20-30.

Amuedo-Dorantes, C., & Pozo, S. (2001). Exchange-rate uncertainty and economic performance. *Review of Development Economics*, *5*(3), 363-374.

Ang, J. B. (2008). Determinants of foreign direct investment in Malaysia. *Journal of Policy Modeling*, *30*(1), 185-189.

Anitha, R. (2012). The effect of liberalization and globalization of foreign direct investment in India. *International J of Marketing, Financial Services & Management Research* 1(8), 108-125.

Arbatli, E. C. (2011). Economic policies and FDI inflows to emerging market economies. International Monetary Fund working paper.

Arnold, J. M., & Javorcik, B. S. (2009). Gifted kids or pushy parents? Foreign direct investment and plant productivity in Indonesia. *Journal of International Economics*, *79*(1), 42-53.

Athukorala, P. C., & Rajapatirana, S. (2003). Capital inflows and the real exchange rate: A comparative study of Asia and Latin America. *The World Economy*, *26*(4), 613-637.

Awan, M. Z., Khan, B., & Zaman, K. (2010). A nexus between foreign direct investment & Pakistan's economy. *International Research Journal of Finance and Economics*, *52*, 17-27.

Blomstrom, M., & Kokko, A. (1997). Regional integration and foreign direct investment. *National Bureau of Economic Research.* (No. w6019).

Boateng, A., Hua, X., Nisar, S., & Wu, J. (2015). Examining the determinants of inward FDI: Evidence from Norway. *Economic Modelling*, *47*, 118-127.

Bosworth, B.P., & Collins, S.M. (1999). Capital flows to developing economies: implications for saving and investment, Brookings Papers on Economic Activity:1

Buckley, P. J. (1988). The limits of explanation: Testing the internalization theory of the multinationial enterprise. *Journal of international business studies*, *19*(2), 181-193.

Buckley, P. J., & Casson, M. C. (2009). The internalisation theory of the multinational enterprise: A review of the progress of a research agenda after 30 years. *Journal of International Business Studies*, *40*(9), 1563-1580.

Buckley, P. J., & Casson, M. C. (1976). The future of the multinational enterprise. London: Macmillan.

Çevis, İ., & Camurdan, B. (2007). The economic determinants of foreign direct investment in developing countries and transition economies. *The Pakistan Development Review*, 285-299.

Chakrabarti, A. (2001). The determinants of foreign direct investments: Sensitivity analyses of cross-country regressions. *Kyklos*, *54*(1), 89-114.

Dabla-Norris, E., Honda, J., Lahreche, A., & Verdier, G. (2010). FDI flows to low-income countries: Global drivers and growth implications.

Deichmann, J., Karidis, S., & Sayek, S. (2003). Foreign direct investment in Turkey: regional determinants. *Applied Economics*, *35*(16), 1767-1778.

Desbordes, R., & Wei, S. J. (2017). The effects of financial development on foreign direct investment. *Journal of Development Economics*, *127*, 153-168.

Diaconu, L. (2014). The foreign direct investments in South-East Asia in the context of the 1997 and 2007 crises. *Procedia-Social and Behavioral Sciences*, *109*, 160-164.

Duarte, L. D. R. V., Kedong, Y., & Xuemei, L. (2017). The relationship between FDI, economic growth and financial development in Cabo Verde. *International Journal of Economics and Finance*, *9*(5), 132.

Dunning, J. H. (1977). Trade, location of economic activity and the MNE: A search for an eclectic approach. In the international allocation of economic activity, 395-418.

Economou, F., Hassapis, C., Philippas, N., & Tsionas, M. (2017). Foreign direct investment determinants in OECD and developing countries. *Review of Development Economics*, *21*(3), 527-542.

Erramilli, M. K., & Rao, C. P. (1993). Service firms' international entry-mode choice: A modified transaction-cost analysis approach. *The Journal of Marketing*, 19-38.

Feldstein, M. (2000). Aspects of global economic integration: Outlook for the future. National Bureau of Economic Research. Cambridge, Massachusetts: NBER Working Paper No.7899.

Hill, C. (2000). International business - Competing in the global marketplace. University of Washington: Irwin McGraw-Hill.

Hunady, J., & Orviska, M. (2014). Determinants of foreign direct investment in EU Countries–Do corporate taxes really matter?. *Procedia Economics and Finance*, *12*, 243-250.

Hussain, A. (2017). Foreign direct investment (FDI) and its impact on the productivity of domestic firms in Pakistan. *Pakistan Business Review*, *18*(4), 792-812.

Hussain, N. (2011). Economic factors and foreign direct investment in India: A correlation study. *Asian Journal of Management Research*, *348*.

Jenkins, C., Thomas, L. (2002). Foreign direct investment in Southern Africa: Determinants, characteristics and implications for economic growth and poverty alleviation. Globalization and poverty project. University of Oxford.

Jeon, B. N., & Rhee, S. S. (2008). The determinants of Korea's foreign direct investment from the United States, 1980–2001: An empirical investigation of firm-level data. *Contemporary Economic Policy*, *26*(1), 118-131.

Jimborean, R., & Kelber, A. (2017). Foreign direct investment drivers and growth in central and eastern Europe in the aftermath of the 2007 global financial crisis. *Comparative Economic Studies*, *59*(1), 23-54.

Julius, R. (1990). Global companies and public policy. New York: Council on foreign relations for the Royal Institute of International Affairs.

Katrakilidis, C. P., Tabakis, N. M., & Varsakelis, N. C. (1997). Macroeconomic environment and foreign direct investment net inflows: An empirical Approach. *Rivista Internazionale di Scienze Economiche e Commerciali*, 44, 375-390.

Kiplagat, B. (2016). The effects of interest rates on foreign direct investments in Kenya.

Koojaroenprasit, S. (2013). Determinants of foreign direct investment in Australia. *Australian Journal of Business and Management Research*, *3*(8), 20.

Krifa-Schneider, H., & Matei, I. (2010). Business climate, political risk and FDI in developing countries: Evidence from panel data. *International Journal of Economics and Finance*, *2*(5), 54.

Mottaleb, K. A., & Kalirajan, K. (2010). Determinants of foreign direct investment in developing countries: A comparative analysis. *Margin: The Journal of Applied Economic Research*, 4(4), 369-404.

Nordin, S., & Ghani, G. M. (2015). Trade liberalization and foreign direct investment in Malaysia. *Information Management and Business Review,* 7(6),11-23.

OECD (1998) Open markets matter: The benefits of trade and investment liberalization. Paris: OECD.

OECD (2008) Benchmark definition of foreign direct investment. Retrieved from https://www.oecd.org/daf/inv/investmentstatisticsandanalysis/40193734.pdf as of October, 27, 2017.

Othman, N. (2013). Determinants of foreign direct investment in Malaysia.

Pandya, V. & Sisombat, S. (2017). Impacts of foreign direct investment on economic growth: Empirical evidence from Australian economy. *International Journal of Economics and Finance*, 9(5), 121-131.

Pantelidis, P., & Paneta, E. (2016). Determinants of Inward Foreign Direct Investment in Greece. *Journal of Economics, Business and Management,4*(5).

Parajuli, S., & Kennedy, P. L. (2010). The exchange rate and inward foreign direct investment in Mexico. Annual meeting, February 6-9, 2010, Orlando, Florida (No. 56459). Southern Agricultural Economics Association.

Parletun, J. (2008). The determinants of foreign direct investment: A regional analysis with focus on Belarus.

Ponomareva, N. (2000). Are there positive or negative spillovers from foreign-owned to domestic firms.

Rugman, A. M. (2010). Reconciling internalization theory and the eclectic paradigm. *Multinational Business Review*, 18(2), 1-12.

Saleem, F., Zahid, A., Shoaib, B., Mohamood, M., & Nayab, S. (2013). Impact of inflation and economic growth on foreign direct investment: evidence from Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, *4*(9), 236-244.

Sattarov, K. (2012). Determinants of foreign direct investment in transition economies: A case study of Kazakhstan and Uzbekistan.

Shahmoradi, B., Thimmaiah, N., & Indumati, S. (2010). Determinants of FDI inflows in high income countries: An intertemporal and cross sectional analysis since 1990. *The International Business & Economics Research Journal*, *9*(5), 59.

Shahrudin, N., Yusof, Z., & Satar, N. M. (2010). Determinants of foreign direct investment in Malaysia: What matters most. *International Review of Business Research Papers*, 6(6), 235-245.

Tolentino, P. E. (2010). Home country macroeconomic factors and outward FDI of China and India. *Journal of International Management*, 16(2), 102-120.

Udoh, E., & Egwaikhide, F. O. (2008). Exchange rate volatility, inflation uncertainty and foreign direct investment in Nigeria. *Botswana Journal of Economics*, *5*(7), 14-31.

Unctad.org World Investment Report 2000. Retrieved from http://unctad.org/en/Docs/wir2000_en.pdf as of November 7, 2017.

Unctad.org World Investment Report 2003. Retrieved from http://unctad.org/en/docs/wir2003light_en.pdf as of November 7, 2017.

Unctad.org World Investment Report 2004. Retrieved from http://unctad.org/en/Docs/wir2004_en.pdf as of November 7, 2017.

Unctad.org World Investment Report 2005. Retrieved from http://unctad.org/en/Docs/wir2005_en.pdf as of November 7, 2017.

Unctad.org World Investment Report 2008. Retrieved from http://unctad.org/en/docs/wir2008_en.pdf as of November 7, 2017.

Unctad.org World Investment Report 2009. Retrieved from http://unctad.org/en/docs/wir2009_en.pdf as of November 7, 2017.

Unctad.org World Investment Report 2010. Retrieved from http://unctad.org/en/Docs/wir2010_en.pdf as of November 7, 2017.

Unctad.org World Investment Report 2012. Retrieved from http://unctad.org/en/PublicationsLibrary/wir2012_embargoed_en.pdf as of November 7, 2017.

Unctad.org World Investment Report 2016. Retrieved from http://unctad.org/en/PublicationsLibrary/wir2016_en.pdf as of November 7, 2017.

Wang, J. Y., & Blomström, M. (1992). Foreign investment and technology transfer: A simple model. *European economic review*, *36*(1), 137-155.

Yang, J. Y. Y., Groenewold, N., & Tcha, M. (2000). The determinants of foreign direct investment in Australia. *Economic Record*, *76*(232), 45-54.

Zekarias, S. M. (2016). The impact of foreign direct investment (FDI) on economic growth in Eastern Africa: Evidence from panel data analysis. *Applied Economics and Finance,* 3(1), 145-160.

Zhao, H. (2003). Country factor differentials as determinants of FDI flow to China. *Thunderbird International Business Review*, *45*(2), 149-169.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). Business research methods. Australia: South-Western.

APPENDIX A

. tsset code year
panel variable: code, 1 to 26
time variable: year, 2000 to 2015

. regress fdi x1lngdp x2inf x3lnexch x4int x5fd

Source	SS	df	MS
Model	7833.5971	5	1566.71942
Residual	16432.9127	402	40.8778922
Total	24266.5098	407	59.6228742

Number of obs = 408
F(5, 402) = 38.33
Prob > F = 0.0000
R-squared = 0.3228
Adj R-squared = 0.3144
Root MSE = 6.3936

Fdi	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
x1lngdp	-1.456677	.2251071	-6.47	0.000	-1.899211	-1.014143
x2inf	.2143021	.0778971	2.75	0.006	.0611655	.3674388
x3lnexch	-.1234209	.1295968	-0.95	0.341	-.3781929	.1313511
x4int	.1405599	.0773918	1.82	0.070	-.0115833	.2927031
x5fd	.1376796	.0102809	13.39	0.000	.1174684	.1578907
_cons	30.74979	5.717277	5.38	0.000	19.51029	41.98928

. vif

Variable	VIF	1/VIF
x4int	3.04	0.328663
x1lngdp	2.39	0.418200
x5fd	1.98	0.506005
x3lnexch	1.47	0.678888
x2inf	1.45	0.691354
Mean VIF	2.07	

. xtreg fdi x1lngdp x2inf x3lnexch x4int x5fd, fe

Fixed-effects (within) regression
Group variable (i): code

Number of obs = 408
Number of groups = 26

R-sq: within = 0.0881
between = 0.0336
overall = 0.0401

Obs per group: min = 14
avg = 15.7
max = 16

F(5,377) = 7.29
corr(u_i, Xb) = -0.3035
Prob > F = 0.0000

fdi	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
x1lngdp	.359351	.513003	0.70	0.484	-.6493546	1.368057

x2inf	.2141691	.0641365	3.34	0.001	.088059	.3402792
x3lnexch	-.2913752	1.950436	-0.15	0.881	-4.126472	3.543721
x4int	-.2782739	.0928809	-3.00	0.003	-.4609034	-.0956444
x5fd	.0318463	.0190046	1.68	0.095	-.005522	.0692145
_cons	-2.893277	13.76661	-0.21	0.834	-29.96223	24.17567
sigma_u	6.5547743					
sigma_e	4.5269241					
rho	.67706188	(fraction of variance due to u_i)				

F test that all u_i=0: F(25, 377) = 17.00 Prob > F = 0.0000

. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (26) = 1.3e+05
Prob>chi2 = 0.0000

. xtserial fdi x1lngdp x2inf x3lnexch x4int x5fd

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
F(1, 25) = 11.076
Prob > F = 0.0027

. regress fdi x1lngdp x2inf x3lnexch x4int x5fd, robust cluster (code)

Regression with robust standard errors

Number of obs = 408
F(5, 25) = 2.45
Prob > F = 0.061
R-squared = 0.3228
Root MSE = 6.3936

Number of clusters (code) = 26

Fdi	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
x1lngdp	-1.456677	.531753	-2.74	0.011	-2.551843	-.3615116
x2inf	.2143021	.1182261	1.81	0.082	-.029189	.4577933
x3lnexch	-.1234209	.3012653	-0.41	0.686	-.7438884	.4970465
x4int	.1405599	.1404546	1.00	0.327	-.1487118	.4298316
x5fd	.1376796	.0510741	2.70	0.012	.0324905	.2428686
_cons	30.74979	12.05566	2.55	0.017	5.920688	55.57889

APPENDIX B

Descriptive Statics

Variable	Mean	Minimum	Maximum	Standard Deviation	N
FDI (%)	5.03	-4.70	58.51	7.69	413
GDP (USD billion)	55,300	43.90	1,110,000	148,000	416
Inflation (%)	4.57	-18.11	38.60	4.87	413
Exchange Rate (LCU/USD)	1,190.27	0.27	21,697.57	3,815.55	416
Interest Rate (%)	10.86	1.14	51.90	7.15	413
Financial Development (%)	61.91	3.76	233.21	43.29	414

APPENDIX C

Correlation Analysis

	Y=FDI	X1=GDP	X2=CPI	X3=OER	X4=INT	X5=FD
FDI	1.0000					
GDP	-0.0509	1.0000				
CPI	0.0016	-0.2424	1.0000			
OER	-0.1151	0.0949	0.3004	1.0000		
INT	-0.0514	-0.6245	0.5321	0.3731	1.0000	
FD	0.3920	0.6192	-0.3736	-0.1527	-0.6374	1.0000