BIBLIOGRAPHY

Abdalla, S. Z. S. (2011). Stock Market Development and Economic Growth in Sudan (1995-2009): Evidence from Granger Causality Test. *Journal of Business Studies Quarterly*, *3*(2).

Abdelnour, Z. K. (2003). Democratization of capital in the Arab world. *Middle East Intelligence Bulletin*, *5*(5).

Abu-Badar, S., & Abu-Quran, A. (2006). Financial Developent and Economic Growth Nexus: Time Series Evidence from Middle Eastern and North African Countries. *Munich Personal RePEc Archive (MPRA) Paper*, (972).

Abu-Sharia, R., & Junankar, P. (2003). Stock Market Development, Economic Reform and Economic Growth: A Case Study of Arab Stock Markets. *Memo, School of Economics and Finance, University of Western Sydney, Australia*.

Adamopoulos, A. (2010). Financial development and economic growth an empirical analysis for Ireland. *International Journal of Economic Sciences and Applied Research*, (1), 75-88.

Adelman, I. (1961). *Theories of economic growth and development*. Stanford University Press.

Adjasi, C. K., & Biekpe, N. B. (2006). Co integration and Dynamic Causal Links amongst African Stock Markets. *Investment Management and Financial Innovations*, *4*, 102-119.

Aga, M., & Kocaman, B. (2008). Efficient market hypothesis and emerging capital markets: empirical evidence from Istanbul Stock Exchange. *International Research Journal of Finance and Economics*, *13*(1), 131-144.

Agarwal, S. (2001). Stock market development and economic growth: Preliminary evidence from African countries. *Journal of Sustainable Development in Africa*, *3*(1), 48-56.

Ageli, M. M., & Zaidan, S. M. (2013). Saudi Financial structure and economic growth: a macroeconometric approach. *Ageli, M. M, Zaidan, SM (2012) Saudi Financial Structure and Economic Growth: A Macroeconometric Approach. International Journal of Economics and Finance*, *5*(3).

Aggarwal, R., Gray, I., & Singer, H. (1999). Capital raising in the offshore market. *Journal of Banking & Finance*, *23*(8), 1181-1194.

Aghion, P., & Durlauf, S. N. (Eds.). (2005). *Handbook of economic growth* (Vol. 1). Elsevier.

Ahmed, A. D. (2010). Financial liberalization, financial development and growth linkages in Sub-Saharan African countries: An empirical investigation. *Studies in Economics and Finance*, *27*(4), 314-339.

Ake, B. (2010). The role of stock market development in economic growth: evidence from some Euronext countries. *International Journal of Financial Research*, *1*(1), 14-20.

Ake, B., & Ognaligui, R. W. (2010). Financial stock market and economic growth in developing countries: the case of Douala stock exchange in Cameroon. *International Journal of Business and Management*, *5*(5).

Akinlo, A. E., & Egbetunde, T. (2010). Financial development and economic growth: The experience of 10 sub-Saharan African countries revisited. *The Review of Finance and Banking*, *2*(1), 17-28.

Alafi, A., & Bruijn, E. J. (2010). A change in the Libyan economy: towards a more market-oriented economy.

Alajekwu, U. B., & Achugbu, A. A. (2012). The role of stock market development on economic growth in Nigeria: a time series analysis. *African Research Review*, *6*(1), 51-70.

Albatel, A. H. (2000). The relationship between government expenditure and economic growth in Saudi Arabia. *Journal of King Saud University*.

Ali, A. S. (2015). Stock Market Development and Economic Growth: An Empirical Analysis Between Turkey and BRICS Countries. In *Chaos, Complexity and Leadership 2013* (pp. 269-283). Springer International Publishing.

Aljbiri, A. (2008). The Importance of Establishment of Financial Market in Libyan Economy. Unpublished PhD thesis. *Mendel University. Finance Department. Czech republic c.www.mendelu.cz*. 3-38.

Aljbiri, A. (2013). The performance of Libyan stock market. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *60*(7), 27-38.

Al-Majali, A. A., & Al-Assaf, G. I. (2014). Long-run and short-run relationship between stock market index and main macroeconomic variables performance in Jordan. *European Scientific Journal*, *10*(10).

Al-Raed Al-Alarabi. Seventh version. July (1961). (In Arabic). Available at: http://al-hakawati.net/arabic/civilizations/raedindexd20.asp

Al-Tammam, M. G. (2005). *Causality Between Financial Development and Economic Growth: The Cases of Kuwait, Oman, and Saudi Arabia* (Doctoral dissertation, Colorado State University).

Altunisik, M. B., & Altunisik, M. B. (1996). A rentier state's response to oil crisis: economic reform policies in Libya. *Arab Studies Quarterly*, 49-63.

Ang, J. B. (2008). A survey of recent developments in the literature of finance and growth. *Journal of Economic Surveys*, *22*(3), 536-576.

Ang, J. B., & McKibbin, W. J. (2007). Financial liberalization, financial sector development and growth: evidence from Malaysia. *Journal of development economics*, *84*(1), 215-233.

Antonios, A. (2010). Stock market and economic growth: an empirical analysis for Germany. *Business and Economics Journal*, *2010*, 1-12

Arestis, P., Demetriades, P. O., & Luintel, K. B. (2001). Financial development and economic growth: the role of stock markets. *Journal of money, credit and banking*, 16-41.

Arrow, K. J., Chenery, H. B., Minhas, B. S., & Solow, R. M. (1961). Capital-labor substitution and economic efficiency. *The Review of Economics and Statistics*, 225-250.

Athanasios, V., & Antonios, A. (2012). STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH AN EMPIRICAL ANALYSIS. *American Journal of Economics and Business Administration*, *4*(2), 135.

Athapathu, A. R., & Jayasinghe, P. (2012). Stock market performance and economic growth: the case of Sri Lanka.

Atje, R., & Jovanovic, B. (1993). Stock markets and development. *European Economic Review*, *37*(2), 632-640.

Ayadi, R., Arbak, E., Naceur, S. B., & De Groen, W. P. (2015). Financial Development, Bank Efficiency, and Economic Growth Across the Mediterranean. In *Economic and Social Development of the Southern and Eastern Mediterranean Countries* (pp. 219-233). Springer International Publishing.

Aybar, C. (1992). Descriptive analysis of stock return behavior in an emerging market: The case of Turkey. *Unpublished Dissertation, The Ohio State University, Columbus, Ohio*.

Beck, T., & Levine, R. (2004). Stock markets, banks, and growth: Panel evidence. *Journal of Banking & Finance*, *28*(3), 423-442.

Beddoe, R., Costanza, R., Farley, J., Garza, E., Kent, J., Kubiszewski, I., ... & Woodward, J. (2009). Overcoming systemic roadblocks to sustainability: The evolutionary redesign of worldviews, institutions, and technologies. *Proceedings of the National Academy of Sciences*, *106*(8), 2483-2489.

Bekaert, G., & Harvey, C. R. (1995). The cost of capital in emerging markets. *Working notes, Duke University and Stanford University*.

Bekaert, G., & Harvey, C. R. (2003). *Market integration and contagion* (No. w9510). National Bureau of Economic Research.

Bekaert, G., & Harvey, C. R. (2003b). *Market integration and contagion*. National Bureau of Economic Research.

Bekaert, G., Harvey, C. R., & Lundblad, C. (2005). Does financial liberalization spur growth? *Journal of financial Economics*, *77*(1), 3-55.

Ben Naceur, S., & Goaied, M. (2008). The determinants of commercial bank interest margin and profitability: evidence from Tunisia. *Frontiers in Finance and Economics*, *5*(1), 106-130.

Bencivenga, V. R., Smith, B. D., & Starr, R. M. (1995). Transactions costs, technological choice, and endogenous growth. *Journal of Economic Theory*, *67*(1), 153-177.

Best, R. (2008). An Introduction to Error Correction Models.

Bhide, A. (1993). The hidden costs of stock market liquidity. *Journal of Financial Economics*, *34*(1), 31-51.

Bolbol, A. A., Fatheldin, A., & Omran, M. M. (2005). Financial development, structure, and economic growth: the case of Egypt, 1974–2002. *Research in International Business and Finance*, *19*(1), 171-194.

Bossone, B. (1999). *The role of trust in financial sector development* (Vol. 2200). World Bank Publications.

Boulila, G., & Trabelsi*, M. (2004). The causality issue in the finance and growth nexus: empirical evidence from Middle East and North African countries. *Review of Middle East Economics and Finance*, *2*(2), 123-138.

Brasoveanu, L. O., Dragota, V., Catarama, D., & Semenescu, A. (2008). Correlations between capital market development and economic growth: the case of Romania. *Journal of applied quantitative methods*, *3*(1), 64-75.

Breman, M. J., Chordia, T., & Subrahmanyam, A. (1998). Alternative factor specifications, security characteristics, and the cross-section of expected stock returns. *Journal of Financial Economics*, *49*(3), 345-373.

Bryman, A., & Bell, E. (2011). *Business research methods 3e*. Oxford university press.

Bryman, A., & Cramer, D. (2011). *Quantitative data analysis with IBM SPSS 17, 18 and 19: a guide for social scientists*. Routledge.

Butler, K. C., & Malaikah, S. J. (1992). Efficiency and inefficiency in thinly traded stock markets: Kuwait and Saudi Arabia. *Journal of Banking & Finance*, *16*(1), 197-210.

Campos, N. F., Hanousek, J., & Filer, R. K. (1999). *Do Stock Markets Promote Economic Growth?* (No. wp151). The Center for Economic Research and Graduate Education-Economic Institute, Prague.

Caporale, G. M., Howells, P. G., & Soliman, A. M. (2004). Stock market development and economic growth: the causal linkage. *Journal of Economic Development*, *29*(1), 33-50.

Cavenaile, L., Gengenbach, C., & Palm, F. (2014). Stock markets, banks and long run economic growth: a panel cointegration-based analysis. *De Economist*, *162*(1), 19-40.

Central Bank of Libya CBL. *Economic Reports*. (In Arabic). Various Issues.

Central Bank of Libya CBL (1969 – 2000). Research and Statistics. *Economic Bulletin. Money and statistics*. (In Arabic). Tripoli – Libya.

Central Bank of Libya CBL (1979). Research and Statistics. *Economic Bulletin 23rd. Annual report (In Arabic).* Tripoli – Libya.

Central Bank of Libya CBL (2000). "Financial and Banking statistic 1966 - 2000". *Economical Researches Administrations (In Arabic)*. Tripoli – Libya.

Central Bank of Libya CBL (2002). Research and Statistics. *Economic Bulletin 46th. Annual report (In Arabic)*. Tripoli – Libya.

Central Bank of Libya CBL (2006). Research and Statistics. *Economic Bulletin. For the fourth quarter of 2006 (In Arabic).* Tripoli – Libya.

Central Bank of Libya CBL (2007). Research and Statistics. *Economic Bulletin 51st. Annual report (In Arabic).* Tripoli – Libya.

Central Bank of Libya CBL (2008). Research and Statistics. *Economic Bulletin. 1st quarter of 2008 (In Arabic)*. Tripoli – Libya.

Central Bank of Libya CBL Annual report (2009). (In Arabic). Available at: http://www.cbl.gov.ly

Central Bank of Libya CBL Annual report (2010). (In Arabic). Available at: http://www.cbl.gov.ly

Central Intelligence Agency CIA (2014). Available at:

https://www.cia.gov/library/publications/the-world-factbook/geos/ly.html

Cheung, Y. W., & Lai, K. S. (1993). Finite-sample sizes of Johansen's likelihood ratio tests for cointegration. *Oxford Bulletin of Economics and statistics*, *55*(3), 313-328.

Chong, L. L. (2000). *Macroeconomic Fundamentals, Stock Market and Economic Growth* (Doctoral dissertation, Universiti Putra Malaysia).

Choong, C. K., Yusop, Z., Law, S. H., & Liew, V. K. S. (2005). Financial Development and Economic Growth in Malaysia: The Perspective of Stock Market. *Investment Management and Financial Innovations*, *2*(4), 105-115.

Chordia, T., Subrahmanyam, A., & Anshuman, V. R. (2001). Trading activity and expected stock returns. *Journal of Financial Economics*, *59*(1), 3-32.

Christopoulos, D. K., & Tsionas, E. G. (2004). Financial development and economic growth: evidence from panel unit root and cointegration tests. *Journal of development Economics*, *73*(1), 55-74.

Cobham, D., & Saint Andrews Univ.(United Kingdom). Dept of Economics;. (1995). *Financial systems for developing countries, with particular reference to Egypt, Iraq, Jordan, Lebanon and Syria* (p. 9). Cairo: Economic Research Forum for the Arab Countries, Iran, and Turkey.

Cohen, D., & Crabtree, B. (2006). Qualitative research guidelines project.

Collis, J., Hussey, R., Crowther, D., Lancaster, G., Saunders, M., Lewis, P., ... & Robson, C. (2003). Business research methods.

Conrad, K., & Jüttner, D. J. (1973). RECENT BEHAVIOUR OF STOCK MARKET PRICES IN GERMANY AND THE RANDOM WALK HYPOTHESIS*. *Kyklos*, *26*(3), 576-599.

Cooper, D. R., & Schindler, P. S. (2003). Business research methods.

Cuthbertson, K., & Nitzsche, D. (2001). *Financial engineering: derivatives and risk management*. John Wiley.

Datar, V. T., Naik, N. Y., & Radcliffe, R. (1998). Liquidity and stock returns: An alternative test. *Journal of Financial Markets*, *1*(2), 203-219.

De Bruyn, S. M. (2000). *Economic growth and the environment: An empirical analysis* (Vol. 18). Springer Science & Business Media.

De Santis, G. (1997). Stock returns and volatility in emerging financial markets. *Journal of international money and finance*, *16*(4), 561-579.

Demetriades, P. O., & Hussein, K. A. (1996). Does financial development cause economic growth? Time-series evidence from 16 countries. *Journal of development Economics*, *51*(2), 387-411.

Demirgüç-Kunt, A., & Huizinga, H. (1999). Determinants of commercial bank interest margins and profitability: some international evidence. *The World Bank Economic Review*, *13*(2), 379-408.

Demirgüç-Kunt, A., & Levine, R. (1996). Stock market development and financial intermediaries: stylized facts. *The World Bank Economic Review*, *10*(2), 291-321.

Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. *The Journal of Finance*, *53*(6), 2107-2137.

Deng, S. (2013). The EU's Adoption of IFRS and the Implication for China: In the Perspective of Accounting Quality and Information Comparability.

Denzin, N. K., & Lincoln, Y. S. (2009). Qualitative research. *Yogyakarta: PustakaPelajar*.

Diamond, D. W. (1996). Financial intermediation as delegated monitoring: A simple example. *FRB Richmond Economic Quarterly*, *82*(3), 51-66.

Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American statistical association*, *74*(366a), 427-431.

Divecha, A. B., Drach, J., & Stefek, D. (1992). Emerging markets: a quantitative perspective. *The journal of portfolio management*, *19*(1), 41-50.

Dryden, M. M. (1970). A statistical study of UK share prices. *Scottish Journal of Political Economy*, *17*(3), 369-389.

Duca, G. (2007). The relationship between the stock market and the economy: experience from international financial markets. *Bank of Valletta Review*, *36*(3).

Ebn Kaplan (2007). How Libya got off the List. Available at: http://www.cfr.org/libya/libya-got-off-list/p10855

Eita, J. H. (2011). Determinants of stock market prices in Namibia. *Department of Economics, Monash University*.

Elliott, K. A. (2009). *The Development of the Stock Market and Its Effect on Economic Growth: The Case of SADC* (Doctoral dissertation, Rhodes University).

Elton, E. J., Gruber, M. J., Brown, S. J., & Goetzmann, W. N. (2009). *Modern portfolio theory and investment analysis*. John Wiley & Sons.

El-Wassal, K. A. (2005). Stock market growth: an analysis of cointegration and causality. *Economic Issues*, *10*(1), 37-58.

Energy Information Administration/ Department of Energy (2005): Libya: Country Analysis Breif. Avaliable at: http://www.eia.doe.gov/emeu/cabs/Libya.html

Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: representation, estimation, and testing. *Econometrica: journal of the Econometric Society*, 251-276.

Engle, R. F., & Manganelli, S. (2004). CAViaR: Conditional autoregressive value at risk by regression quantiles. *Journal of Business & Economic Statistics*, *22*(4), 367-381.

Fabozzi, F. J., Modigliani, F., Jones, F. J., & Ferri, M. G. (2002). Foundations of financial markets and institutions.

Fajimi, E. F. (2009). *Can Stock Market Development Predict Economic Growth? A Case Study of the Nigerian Economy (1980--2004)*. ProQuest.

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work*. *The journal of Finance*, *25*(2), 383-417.

Fama, E. F., & French, K. R. (1988). Dividend yields and expected stock returns. *Journal of financial economics*, *22*(1), 3-25.

Fama, E. F., & French, K. R. (1998). Value versus growth: The international evidence. *The Journal of Finance*, *53*(6), 1975-1999.

Fang, Y. (2000). Seasonality in foreign exchange volatility. *Applied Economics*, *32*(6), 697-703.

Fernandez, S., & Rainey, H. G. (2006). Managing successful organizational change in the public sector. *Public administration review*, *66*(2), 168-176.

Fernandez-Amador, O., Gächter, M. L., Larch, M., & Peter, G. (2011). Monetary policy and its impact on stock market liquidity: Evidence from the euro zone. *Available at SSRN 1754366*.

Ferson, W., & Harvey, C. R. (1994). An exploratory investigation of the fundamental determinants of national equity market returns. In *The internationalization of equity markets* (pp. 59-147). University of Chicago Press.

Filer, R. K., Hanousek, J., & Campos, N. F. (2000). Do stock markets promote economic growth?. *CERGE-EI Working Paper Series*, (151).

Fine, B., & Jomo, K. S. (Eds.). (2006). *The new development economics: post Washington Consensus neoliberal thinking*. Zed Books.

Florackis, C., Giorgioni, G., Kostakis, A., & Milas, C. (2014). On stock market illiquidity and real-time GDP growth. *Journal of International Money and Finance*, *44*, 210-229.

Fram, E. H., & Ajami, R. (1994). Globalization of markets and shopping stress: cross-country comparisons. *Business Horizons*, *37*(1), 17-23.

Fry, M. J. (1978). Money and capital or financial deepening in economic development?. *Journal of money, credit and banking*, 464-475.

Fry, M. J. (1982). Models of financially repressed developing economies. *World development*, *10*(9), 731-750.

Fulghieri, P., & Rovelli, R. (1998). Capital markets, financial intermediaries, and liquidity supply. *Journal of Banking & Finance*, *22*(9), 1157-1180.

Gamolya, A. (2006). *Stock Market and Economic Growth in Ukraine* (Doctoral dissertation, Economics Education and Research Consortium).

Gandhi, D. K., Saunders, A., & Woodward, R. S. (1980). Thin capital markets: a case study of the Kuwaiti stock market. *Applied Economics*, *12*(3), 341-349.

Garcia, V. F., & Liu, L. (1999). Macroeconomic determinants of stock market development. *Journal of Applied Economics*, *2*(1), 29-59.

Gentzoglanis, A. (2007). Financial integration, regulation and competitiveness in Middle East and North Africa countries. *Managerial Finance*, *33*(7), 461-476.

Goldstein, M., & Khan, M. S. (1976). Large versus Small Price Changes and the Demand for Imports (Demande d'importation et modification forte ou faible des prix)(Grandes y pequeñas variaciones de precios y la demanda de importación). *Staff Papers-International Monetary Fund*, 200-225.

Gonzalo, J. (1994). Five alternative methods of estimating long-run equilibrium relationships. *Journal of econometrics*, *60*(1), 203-233.

Graff, M. (1999). Financial Development and Economic Growth-A New Empirical Analysis. *Dresden Discussion Papers in Economics*, (5/99).

Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica: Journal of the Econometric Society*, 424-438.

Granger, C. W. (1986). Developments in the study of cointegrated economic variables. *Oxford Bulletin of economics and statistics*, *48*(3), 213-228.

Granger, C. W. (1988). Some recent development in a concept of causality. *Journal of econometrics*, *39*(1), 199-211.

Granger, C. W., & Joyeux, R. (1980). An introduction to long-memory time series models and fractional differencing. *Journal of time series analysis*, *1*(1), 15-29.

Greenwood, J., & Jovanovic, B. (1989). *Financial development, growth, and the distribution of income* (No. w3189). National Bureau of Economic Research.

Greenwood, J., & Smith, B. D. (1997). Financial markets in development, and the development of financial markets. *Journal of Economic Dynamics and Control*, *21*(1), 145-181.

Gurley, J. G., & Shaw, E. S. (1955). Financial aspects of economic development. *The American Economic Review*, 515-538.

GÜRSOY, C. T., & MÜSLÜMOV, A. (2011). Stock Markets and Economic Growth: a Causality Test. *Doğuş Üniversitesi Dergisi*, *1*(2), 124-131.

Habermas, J. (1981). New social movements. *Telos*, *1981*(49), 33-37.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *The Journal of Marketing Theory and Practice*, *19*(2), 139-152.

Hamid, K., Suleman, M. T., Shah, S. Z. A., & Akash, R. S. I. (2010). Testing the weak form of efficient market hypothesis: Empirical evidence from Asia-Pacific markets. *International Research Journal of Finance and Economics*, *58*, 121-133.

Han Kim, E., & Singal, V. (2000). Stock Market Openings: Experience of Emerging Economies*. *The Journal of Business*, *73*(1), 25-66.

Har, W. M., Ee, C. S., & Tan, C. T. (2008). Stock Market and Economic Growth in Malaysia: Casuality Test. *Asian Social Science*, *4*(4), 86-92.

Harrell, M. C., & Bradley, M. A. (2009). *Data collection methods. Semi-structured interviews and focus groups*. RAND NATIONAL DEFENSE RESEARCH INST SANTA MONICA CA.

Hartmann, M. A., & Khambata, D. (1993). Emerging stock markets: investment strategies of the future. *The Columbia Journal of World Business*, *28*(2), 82-104.

Harvey, C. R. (1994). *Conditional asset allocation in emerging markets* (No. w4623). National Bureau of Economic Research.

Hassan, M. K., Haque, M., & Lawrence, S. B. (2006). An empirical analysis of emerging stock markets of Europe. *Quarterly Journal of Business and Economics*, 31-52.

Haugen, R. A., & Haugen, R. A. (1990). Modern investment theory.

Heertje, A. (2004). Schumpeter and methodological individualism. *Journal of Evolutionary Economics*, *14*(2), 153-156.

Henry, P. B. (2000). Stock market liberalization, economic reform, and emerging market equity prices. *The Journal of Finance*, *55*(2), 529-564.

Hermes, N., & Lensink, R. (Eds.). (2013). *Financial development and economic growth: theory and experiences from developing countries*. Routledge.

Holmström, B., & Tirole, J. (1993). Market liquidity and performance monitoring. *Journal of Political Economy*, 678-709.

Hondroyiannis, G., Lolos, S., & Papapetrou, E. (2005). Financial markets and economic growth in Greece, 1986–1999. *Journal of International Financial Markets, Institutions and Money*, *15*(2), 173-188.

Hossain, M. S., & Kamal, K. M. M. (2010). Does stock market development cause economic growth? A time series analysis for Bangladesh economy. In *International Conference On Applied Economics–ICOAE* (p. 299).

Human Rights Watch HRW (2005). Libyan Reforms Welcome, But concerns Remain. Available at:

http://www.hrw.org/en/news/2005/05/22/libya-reforms-welcome%20concerns-remain

Ibrahim, M. H., & Yusoff, S. W. (2001). Macroeconomic variables, exchange rate and stock price: A Malaysian perspective. *International Journal of Economics, Management and Accounting*, *9*(2).

Ihendinihu, J. U., & Onwuchekwa, J. C. (2012). Stock market performance and economic growth in Nigeria (1984-2011). *Journal of Emerging Trends in Economics and Management Sciences*, *3*(6), 971-977.

Ihsan, H., Ahmad, E., Haq, M. I. U., & Sadia, H. (2007). Relationship of Economic and Financial Variables with Behaviors of Stock Returns. *Journal of Economic Corporation*, *28*(2), 1-24.

International Monetary Fund IMF (2005). *International Monetary Fund Country No 05/83. IMF*, March, Washington, D. C. Avaliable at:

http://www.imf.org/external/pubs/ft/weo/2005/01/

International Monetary Fund IMF (2012). *World Economic and Finance Surveys* .October 2012. Available at:

http://www.imf.org/external/pubs/ft/weo/2012/02/weodata/index.aspx

Islam, R. (2010). Banks, stock markets and economic growth: Evidence from selected developing countries.

Jaccard, M. (2006). *Sustainable fossil fuels: the unusual suspect in the quest for clean and enduring energy*. Cambridge University Press.

Jamal, A., Abdul Karim, M. R., & Hamidi, M. (2012). Determinants of Commercial Banks' Return on Asset: Panel Evidence from Malaysia. *International Journal of Commerce, Business and Management*, *1*(3), 55-62.

Jamil, M. (2010). *Impact of Financial Markets Development and Stock Market Volatility on Economic Growth: A Dynamic Panel Data Analysis"*. Working Paper, University of Viena.

Jean, A., & Arché Jean, D. B. A. (2008). *The Role of Agriculture in the Economic Development of Haiti: Why are the Haitian Peasants So Poor?*. AuthorHouse.

Jennergren, L. P., & Korsvold, P. (1975). The non-random character of Norwegian and Swedish stock market prices. *International Capital Markets, North-Holland, Amsterdam*.

Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of economic dynamics and control*, *12*(2), 231-254.

Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration—with applications to the demand for money. *Oxford Bulletin of Economics and statistics*, *52*(2), 169-210.

Jones, C. P. (2007). *Investments: analysis and management*. John Wiley & Sons.

Kagochi, J. M., Al Nasser, O. M., & Kebede, E. (2013). Does financial development hold the key to economic growth?: the case of sub-Saharan Africa. *The Journal of Developing Areas*, *47*(2), 61-79.

Kargbo11, S. M., & Adamu, P. A. (2009). Financial development and economic growth in Sierra Leone.

Kassimatis, K. (2002). Financial liberalization and stock market volatility in selected developing countries. *Applied Financial Economics*, *12*(6), 389-394.

Kearney, I. (1998). *Is There A Stable Migration Equation for Ireland?* (No. WP097).

Kemal, A. R., Qayyum, A., & Hanif, M. N. (2004). Financial development and economic growth: evidence from a heterogeneous panel of high income countries.

Kemal, A. R., Qayyum, A., & Hanif, M. N. (2007). Financial Development and Economic Growth.

Kenny, C. J., & Moss, T. J. (1998). Stock markets in Africa: emerging lions or white elephants?. *World Development*, *26*(5), 829-843.

Khan, M. A., Qayyum, A., & Ghani, E. (2006). Trade Liberalisation, Financial Sector Reforms, and Growth [with Comments]. *The Pakistan Development Review*, 711-731.

Khan, M. A., Qayyum, A., Sheikh, S. A., & Siddique, O. (2005). Financial Development and Economic Growth: The Case of Pakistan [with Comments]. *The Pakistan Development Review*, 819-837.

Kim, T. Y., Shin, J., Kim, Y., & Lee, J. D. (2014). The Relationship Among Stock Markets, Banks, Economic Growth, and Industry Development. In *Economic Growth* (pp. 279-292). Springer Berlin Heidelberg.

King, R. G., & Levine, R. (1993). Finance and growth: Schumpeter might be right. *The quarterly journal of economics*, 717-737.

King, R. G., & Levine, R. (1993). Finance, entrepreneurship and growth. *Journal of Monetary economics*, *32*(3), 513-542.

Koutoulas, G., & Kryzanowski, L. (1996). Macrofactor Conditional Volatilities, Time-Varying Risk Premia and Stock Return Behavior. *Financial Review*, *31*(1), 169-195.

Kuznets, S. (1973). Modern economic growth: findings and reflections. *The American Economic Review*, 247-258.

Kyophilavong, P., Uddin, G., & Shahbaz, M. (2014). *The nexus Between Financial Development and Economic Growth in Laos* (No. 2014-447).

Laforest, J., Bouchard, L. M., & Maurice, P. (2012). *Guide to Organizing Semi-structured Interviews with Key Informants: Safety Diagnosis Tool Kit for Local Communities*. Institut national de santé publique Québec avec la collaboration de Ministère de la sécurité publique.

Lane, T., Oding, N., & Welfens, P. J. (Eds.). (2003). *Real and Financial Economic Dynamics in Russia and Eastern Europe: With 50 Figures and 63 Tables*. Springer Science & Business Media.

Law, S. H., & Singh, N. (2014). Does too much finance harm economic growth?. *Journal of Banking & Finance*, *41*, 36-44.

Leedy, P. D., & Ormrod, J. E. (2005). Practical research. *Planning and design*, *8*.

Levine, R. (1991). Stock markets, growth, and tax policy. *The Journal of Finance*, *46*(4), 1445-1465.

Levine, R. (1996). Stock markets: a spur to economic growth. *Finance and Development-English Edition*, *33*(1), 7-10.

Levine, R. (1997). Financial development and economic growth: views and agenda. *Journal of economic literature*, 688-726.

Levine, R. (1998). The legal environment, banks, and long-run economic growth. *Journal of money, credit and banking*, 596-613.

Levine, R., & Zervos, S. (1998). Stock markets, banks, and economic growth. *American economic review*, 537-558.

Levine, R. (2002). Bank-based or market-based financial systems: which is better?. *Journal of financial intermediation*, *11*(4), 398-428.

Levine, R. (2003). More on finance and growth: more finance, more growth?. *Federal Reserve Bank of St. Louis Review*, *85*(July/August 2003).

Levine, R., Loayza, N., & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *Journal of monetary Economics*, *46*(1), 31-77.

Levine, R., & Zervos, S. (1996). Stock market development and long-run growth. *The World Bank Economic Review*, *10*(2), 323-339.

Levine, R., & Zervos, S. (1998). Stock markets, banks, and economic growth. *American economic review*, 537-558.

Lewis, P., Thornhill, A., & Saunders, M. (2007). *Research methods for business students*. Pearson Education UK.

Libyan Stock Market LSM *annual Report (2006)*. (In Arabic). Available at: http://www.lsm.ly/Arabic/Pages/default.aspx

Libyan Stock Market LSM *annual Report (2007)*. (In Arabic). Available at: http://www.lsm.ly/Arabic/Pages/default.aspx

Libyan Stock Market LSM *annual Report (2008)*. (In Arabic). Available at: http://www.lsm.ly/Arabic/Pages/default.aspx

Libyan Stock Market LSM *annual Report (2009)*. (In Arabic). Available at: http://www.lsm.ly/Arabic/Pages/default.aspx

Libyan Stock Market LSM *annual Report (2010)*. (In Arabic). Available at: http://www.lsm.ly/Arabic/Pages/default.aspx

Libyan Stock Market LSM *annual Report (2011)*. (In Arabic). Available at: http://www.lsm.ly/Arabic/Pages/default.aspx

Libyan Stock Market Structure (2008). *LSM unpublished publication*. (In Arabic)

Liu, W. C., & Hsu, C. M. (2006). The role of financial development in economic growth: The experiences of Taiwan, Korea, and Japan. *Journal of Asian Economics*, *17*(4), 667-690.

Lucas, R. E. (1998). On the mechanics of economic development. *ECONOMETRIC SOCIETY MONOGRAPHS*, *29*, 61-70.

Luintel, K. B., & Khan, M. (1999). A quantitative reassessment of the finance–growth nexus: evidence from a multivariate VAR. *Journal of Development Economics*, *60*(2), 381-405.

Hossain, M. S., & Kamal, K. M. M. (2010). Does stock market development cause economic growth? A time series analysis for Bangladesh economy. In *International Conference On Applied Economics–ICOAE* (p. 299).

Maanen, J. V. (1983). Qualitative methodology. *Beverly Hills: Sage*.

Maghyereh, A. I. (2001). *Stock market development and economic growth: the Jordanian experience* (Doctoral dissertation, University of Durham).

Malhotra, N. K., Birks, D. F., Palmer, A., & Koenig-Lewis, N. (2007). Market research: an applied approach. *Journal of marketing management*, *27*, 1208-1213.

Malkiel, B. G. (2003). The efficient market hypothesis and its critics. *Journal of economic perspectives*, 59-82.

Masoud, N. M. (2009). *Libya's economic reform programme and the case for a stock market* (Doctoral dissertation, University of Huddersfield).

Masoud, N. M. (2013). The Impact of Stock Market Performance upon Economic Growth. *International Journal of Economics and Financial Issues*, *3*(4), 788-798.

Matadeen, J., Seetanah, B., Sookia, N., & Gonpot, P. STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH: EVIDENCE FROM ISLAND ECONOMIES IN PANEL VAR FRAMEWORK.

McKinnon, R. I. (1973). *Money and capital in economic development*. Brookings Institution Press.

Melamed, C., Hartwig, R., & Grant, U. (2011). Jobs, growth and poverty: what do we know, what don't we know, what should we know?. *Growth*, *18*(6), 10.

Minier, J. A. (2003). Are small stock markets different?. *Journal of Monetary Economics*, *50*(7), 1593-1602.

Mishkin, F. S. (2002). Inflation targeting. *An Encyclopedia of Macroeconomics, Cheltenham, UK and Northampton, MA, USA: Edward Elgar*, 361-5.

Mishkin, F. S., & Eakins, S. G. (2006). *Financial markets and institutions*. Pearson Education India.

Morck, R., Yeung, B., & Yu, W. (2000). The information content of stock markets: why do emerging markets have synchronous stock price movements?. *Journal of financial economics*, *58*(1), 215-260.

Moustain, F. A. (2004). *Does financial development cause economic growth? An empirical investigation drawing on the Moroccan experience* (No. 542785).

Muharib, A., & ALKarim, I. F. A. (2011). *Stock markets/banks and economic growth/empirical evidence from Jordan* (Doctoral dissertation).

Nair-Reichert, U., & Weinhold, D. (2001). Causality Tests for Cross-Country Panels: a New Look at FDI and Economic Growth in Developing Countries. *Oxford bulletin of economics and statistics*, *63*(2), 153-171.

Nazir, M. S., & Afza, T. (2009). Working capital requirements and the determining factors in Pakistan. *IUP Journal of Applied Finance*, *15*(4), 28-38.

Ndako, U. B. (2010). Stock markets, banks and economic growth: time series evidence from South Africa. *African Finance Journal*, *12*(2), 72-92.

Neusser, K., & Kugler, M. (1998). Manufacturing growth and financial development: Evidence from OECD countries. *Review of economics and statistics*, *80*(4), 638-646.

Ngare, E., Nyamongo, E. M., & Misati, R. N. (2014). Stock market development and economic growth in Africa. *Journal of Economics and Business*, *74*, 24-39.

Nowbutsing, B. (2009). FDI, domestic investment and economic growth: a theoretical framework.

Nyasha, S., & Odhiambo, N. M. (2015). Do banks and stock markets spur economic growth? Kenya's experience. *International Journal of Sustainable Economy*, *7*(1), 54-65.

Obstfeld, M. (1992). *Risk-taking, global diversification, and growth* (No. w4093). National Bureau of Economic Research.

Obstfeld, M. (1994). Risk-Taking, Global Diversification, and Growth. *The American Economic Review*, 1310-1329.

Odhiambo, N. M. (2009). Stock Market development and economic growth in South Africa: an ARDL-bounds testing approach. *Johannesburg: University of South Africa*.

Odhiambo, N. M. (2014). Financial systems and economic growth in South Africa: a dynamic complementarity test. *International Review of Applied Economics*, *28*(1), 83-101.

Ogunremi, O. (2010). *Financial development and economic growth: A comparative study of selected developing countries* (Doctoral dissertation, HOWARD UNIVERSITY).

Olweny, T. O., & Kimani, D. (2011). Stock market performance and economic growth: empirical evidence from Kenya using causality test approach. *Advances in Management and Applied Economics*, *1*(3), 153-196.

Oppenheim, A. N. (2000). Questionnaire Design, Interviewing and Attitude Measurement, Bloomsbury Academic.

Osamwonyi, I. O., & Kasimu, A. (2013). Stock market and economic growth in Ghana, Kenya and Nigeria. *International Journal of Financial Research*, *4*(2), p83.

Oskooe, S. A. (2010). Emerging stock market performance and economic growth. *American Journal of Applied Sciences*, *7*(2), 265-269.

Pagano, M. (1993). Financial markets and growth: an overview. *European economic review*, *37*(2), 613-622.

Patrick, H. T. (1966). Financial development and economic growth in underdeveloped countries. *Economic development and Cultural change*, 174-189.

Paul. K (2004). News Analysis: Libya's Disarmament: A Model for U. S. Policy? Arms Control Today. Available at:

https://www.armscontrol.org/act/2004_06/NewsAnalysis

Peia, O., & Roszbach, K. (2014). Finance and growth: time series evidence on causality. *Journal of Financial Stability*.

Petersen, M. A., & Fialkowski, D. (1994). Posted versus effective spreads: Good prices or bad quotes?. *Journal of Financial Economics*, *35*(3), 269-292.

Poovey, M. (1995). *Making a social body: British cultural formation, 1830-1864*. University of Chicago Press.

Pradhan, R. P., de São Pedro Filho, F., & Hall, J. H. (2014). The impact of stock market development and inflation on economic growth in India: evidence using the ARDL bounds testing and VECM approaches. *International Journal of Economics and Business Research*, *8*(2), 143-160.

Pratten, C. F. (1993). The Stock Market. Cambridge: Cambridge University Press.

Randers, J., & Meadows, D. L. (2005). The Limits to Growth: The 30-Year Update.

RAY, D. S. (2012). Inflation and Stock Price Behaviour in Selected Asian Economies: An Econometric Snapshot. *Advances in Asian Social Science*, *2*(1), 387-397.

RAY, D. S. (2012). Testing granger causal relationship between macroeconomic variables and stock price behaviour: evidence from India. *Advances in Applied Economics and Finance*, *3*(1), 470-481.

Regmi, U. R. (2012). Stock market development and economic growth: Empirical evidence from Nepal. *Administration and Management Review*, *24*(1), 1-28.

Rioja, F., & Valev, N. (2014). Stock markets, banks and the sources of economic growth in low and high income countries. *Journal of Economics and Finance*, *38*(2), 302-320.

Rose, P. S., & Marquis, M. H. (1997). Money and Capital Market, Financial Institutions and Instruments in a Global Marketplace. *P94,*.

Rostow, W. W. (1990). *The stages of economic growth: A non-communist manifesto*. Cambridge University Press.

Rousseau, P. L., & Sylla, R. (2003). Financial systems, economic growth, and globalization. In *Globalization in historical perspective* (pp. 373-416). University of Chicago Press.

Rousseau, P. L., & Wachtel, P. (1998). Financial intermediation and economic performance: historical evidence from five industrialized countries. *Journal of money, credit and banking*, 657-678.

Rousseau, P. L., & Wachtel, P. (2000). Equity markets and growth: cross-country evidence on timing and outcomes, 1980–1995. *Journal of Banking & Finance*, *24*(12), 1933-1957.

Rust, L. (1993). Parents and children shopping together: A new approach to the qualitative analysis of observational data. *Journal of Advertising Research*, *33*(4), 65-70.

Samargandi, N., Fidrmuc, J., & Ghosh, S. (2015). Is the Relationship Between Financial Development and Economic Growth Monotonic? Evidence from a Sample of Middle-Income Countries. *World Development*, *68*, 66-81.

Saunders, M. N., Saunders, M., Lewis, P., & Thornhill, A. (2011). *Research methods for business students, 5/e*. Pearson Education India.

Seetanah, B., Sannassee, V., & Lamport, M. (2008). Stock Market Development and Economic Growth in Developing countries: Evidence from Panel VAR framework. CSAE Working Paper 041, University of Oxford, UK. Available from: http://www. csae. ox. ac. uk/conferences/2010-EDiA/papers/041-Seetanah. pdf [Accessed 04 October 2010].

Seetanah, B., Subadar, U., Sannassee, R. V., Lamport, M., & Ajageer, V. (2012). *Stock market development and economic growth: Evidence from least developed countries* (No. 1205). Hochschule fuer Technik und Wirtschaft, Berlin.

Sekaran, U. (2006). *Research methods for business: A skill building approach*. John Wiley & Sons.

Sethi, P., & Kumar, B. (2014). Financial structure gap and economic development in India. *Journal of Business Economics and Management*, *15*(4), 776-794.

Shafii, Z & Aziz, A (2009). The long run relationship between economic growth and stock market development: a causality analysis for 20 OIC member countries. *Journal of International Association for Islamic Economics and the Islamic Foundation*. V. 13 (1). 199-206.

Shahbaz, M., Ahmed, N., & Ali, L. (2008). Stock market development and economic growth: ARDL causality in Pakistan. *International Research Journal of Finance and Economics*, *14*(1), 182-195.

Shan, J. (2003). Financial development and economic growth: the empirical evidence from China. In *Proceedings of the 15th Annual Conference for Chinese Economics Studies Australia (ACESA)*.

Sharma, S. C., & Mathur, I. (1989). Do stock market prices affect mergers?. *Managerial Finance*, *15*(4), 40-42.

SHERNANNA, H. (2013). *Critical perspectives on the efficient implementation of privatisation policies in Libya: assessing financial, economic, legal, administrative and social requirements* (Doctoral dissertation, Durham University).

Siam, W. Z., Khrawish, H. A., & Jaradat, M. (2010). The relationships between stock market capitalization rate and interest rate: Evidence from Jordan. *Business and Economic Horizons*, (02), 60-66.

Sililo, M. (2010). *Stock market development and economic growth: a case for Zambia* (Doctoral dissertation, Stellenbosch: University of Stellenbosch).

Sims, C. A. (1972). Money, income, and causality. *The American economic review*, 540-552.

Singh, A. (1991). The stock market and economic development: should developing countries encourage stock markets?.

Singh, A. (1996). Pension reform, the stock market, capital formation and economic growth: A critical commentary on the World Bank's proposals. *International Social Security Review*, *49*(3), 21-43.

Singh, A. (1997). Financial liberalisation, stockmarkets and economic development*. *The Economic Journal*, *107*(442), 771-782.

Singh, A. (1998). Should Africa promote stock market capitalism?.

Singh, A., & Weisse, B. A. (1998). Emerging stock markets, portfolio capital flows and long-term economie growth: Micro and macroeconomic perspectives. *World Development*, *26*(4), 607-622.

Sinha, D., & Macri, J. (2001). Financial development and economic growth: the case of eight Asian countries.

Slattery, M. (2003). *Key ideas in sociology*. Nelson Thornes.

Smith, G. (2007). Random walks in Middle Eastern stock markets. *Applied Financial Economics*, *17*(7), 587-596.

Solnik, B. H. (1973). Note on the validity of the random walk for European stock prices. *The journal of Finance*, *28*(5), 1151-1159.

Spears, A. (1992). The role of financial intermediation in economic growth in Sub-Saharan Africa. *Canadian Journal of Development Studies/Revue canadienne d'études du développement*, *13*(3), 361-380.

Srinivasan, P. (2014). *Stock Market Development and Economic growth in India: An Empirical Analysis*. University Library of Munich, Germany.

Stapley, N. F. (1986). *The Stock Market: A Guide for the Private Investor*. Woodhead-Faulkner.

Starbuck, W. H. (2004). Methodological challenges posed by measures of performance. *Journal of Management and Governance*, *8*(4), 337-343.

Stefani, P. (2007). Financial Development and Economic Growth in Brazil: 1986-2006. *Economics Bulletin*, *3*(69), 1-13.

Steinar, K. (1996). Interviews: An introduction to qualitative research interviewing. *Lund: Studentlitteratur*.

Stern, N. H. (2007). *The economics of climate change: the Stern review*. cambridge University press.

Stiglitz, J. E. (1985). Credit markets and the control of capital. *Journal of Money, credit and banking*, 133-152.

Stiglitz, J. E. (2002). Information and the Change in the Paradigm in Economics. *American Economic Review*, 460-501.

St John, R. B. (2014). *Historical dictionary of Libya*. Rowman & Littlefield.

Stone, D. (1992). The emerging markets and strategic asset allocation. *The Journal of Investing*, *1*(1), 40-45.

Subrahmanyam, A., & Titman, S. (1999). The going-public decision and the development of financial markets. *The Journal of Finance*, *54*(3), 1045-1082.

Tachiwou, A. M. (2009). Causality tests between stock market development and economic growth in West African Monetary Union. *Economia. Seria Management*, *12*(2), 14-27.

Tang, H. P., Habibullah, M. S., & Puah, C. H. (2007). Stock market and economic growth in selected Asian countries.

Teweles, R. J., & Bradley, E. S. (1998). *The stock market* (Vol. 64). John Wiley & Sons.

The Importance of Libyan Stock Market in Libyan Economy (2009). *LSM unpublished publication*. (In Arabic).

The Investor's Guide (2009). *LSM unpublished publication*. (In Arabic).

Thornton, J. (1995). Financial deepening and economic growth in developing countries. *Economia Internazionale/International Economics*, *48*(3), 423-430.

Ticehurst,G . W., & Veal, A. J. (2000). Business Research Methods: A Managerial Approach. Longman. Available at:

http://www.bookdepository.com/Business-Research-Methods-George-Ticehurst/9781741032536

Tim, K. (2004). Gaddafi talks of olive branches and business deals but the old threat of violence still remains. Available at:

http://www.independent.co.uk/news/world/europe/gaddafi-talks-of-olive-branches-and-business-deals-but-the-old-threat-of-violence-still-remains-6170637.html

TU, J. (2011). Can US Economic Variables Predict Chinese Stock Market?. 2011 China International Conference in Finance, Wuhan.

Ujunwa, A., & Salami, O. P. (2010). Stock market development and economic growth: Evidence from Nigeria. *European Journal of Economics, Finance and Administrative Sciences*, *25*, 44-53.

Uma, S., & Roger, B. (2003). Research methods for business: A skill building approach. *John Wiley and Sons Inc., New York*.

Van Nieuwerburgh, S., Buelens, F., & Cuyvers, L. (2006). Stock market development and economic growth in Belgium. *Explorations in Economic History*, *43*(1), 13-38.

Vandewalle, D. (1996). *North Africa: development and reform in a changing global economy*. Macmillan.

Vandewalle, D. J. (1998). *Libya since independence: oil and state-building*. Cornell University Press.

Vazakidis, A., & Adamopoulos, A. (2009). Stock market development and economic growth. *American Journal of Applied Sciences*, *6*(11), 1932.

Wai, U. T., & Patrick, H. T. (1973). Stock and Bond Issues and Capital Markets in Less Developed Countries (Emissions d'actions et d'obligations et marchés des capitaux dans les pays peu développés)(Las emisiones de acciones y bonos y los mercados del capital en los países menos desarrollados). *Staff Papers-International Monetary Fund*, 253-317.

Waqabaca, C. (2004). *Financial development and economic growth in Fiji*. Economics Department, Reserve Bank of Fiji.

Wei- Bin Zhang (2005). Economic Growth Theory: Capital, Knowledge and Economic Structure. Ashgate Publishing Limited.

Wells & David, A. (1890). Recent economic changes and their effect on the production and distribution of wealth and the well- being of society. *New York. Appleton.*

Wilcox, J. W. (1992). Global investing in emerging markets. *Financial Analysts Journal*, 15-19.

Wild, J., & Lebdaoui, H. (2014). Stock Market Performance and Economic Growth in Morocco. *Global Advanced Research Journal of Management and Business Studies*, *3*(5), 207-216.

Worrall, L., Remenyi, D., & Money, A. (2000). A Methodology for Evaluating User Perceptions of the Delivery of ICT Services: a comparative study of six UK local authorities. *Australasian Journal of Information Systems*, *8*(1).

Yang, Y., & Huang, Y. (1999). How important is APEC to China?. *Australian Economic Papers*, *38*(3), 328-342.

Yartey, C. A. (2008). The determinants of stock market development in emerging economies: is South Africa different?. *IMF Working Papers*, 1-31.

Zead, A. Alharm (2010). Presentation: Country overview and recently development of The Libyan Stock Market. Ahmad Nagi, Centrla depository manager, AMEDA 12th meeting, Sebrata – Libya from 28th November 2010 to 1st December 2010: Available at:

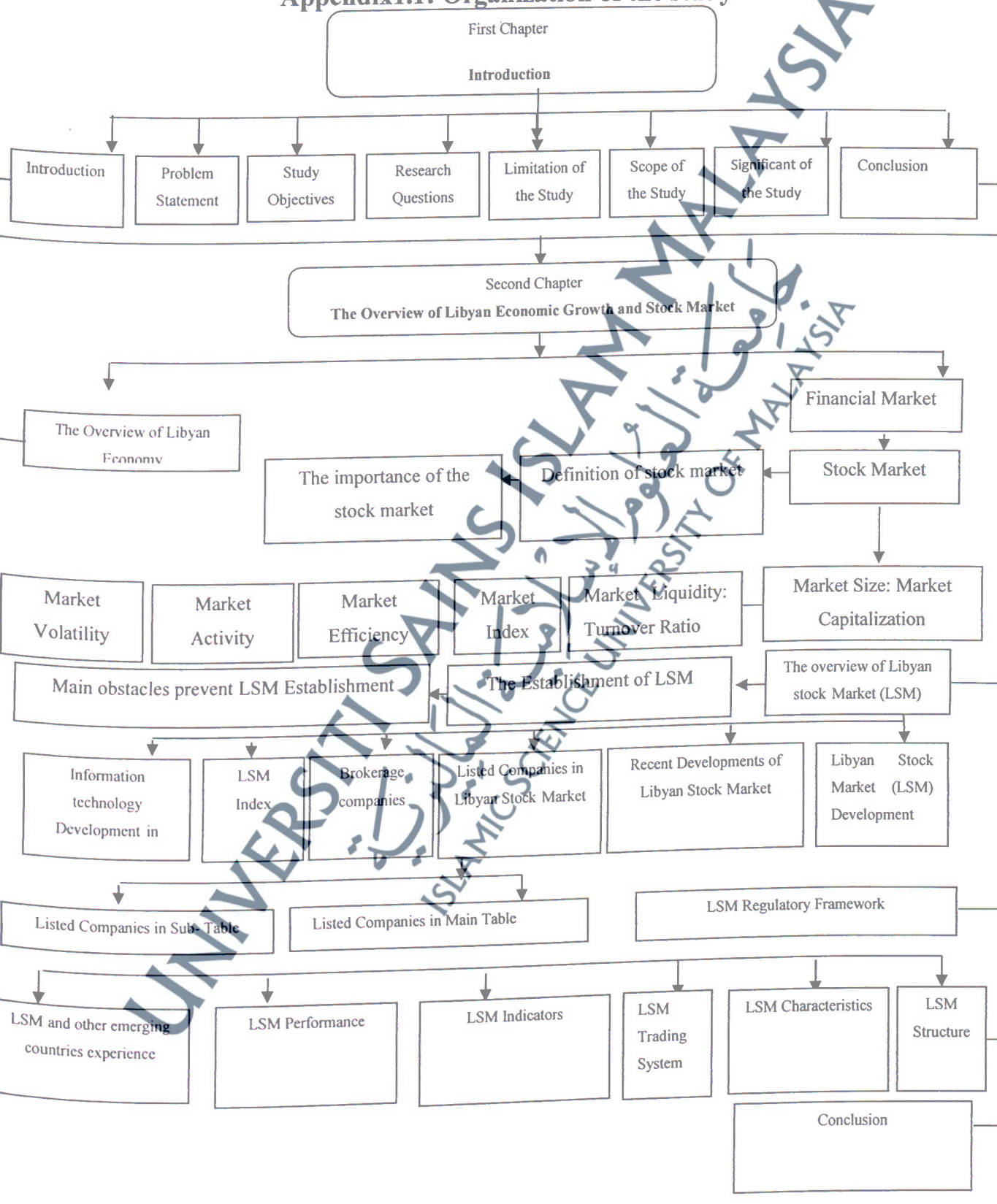
http://ahramdigital.org.eg/makalat.aspx?archiveid=1&eid=2744

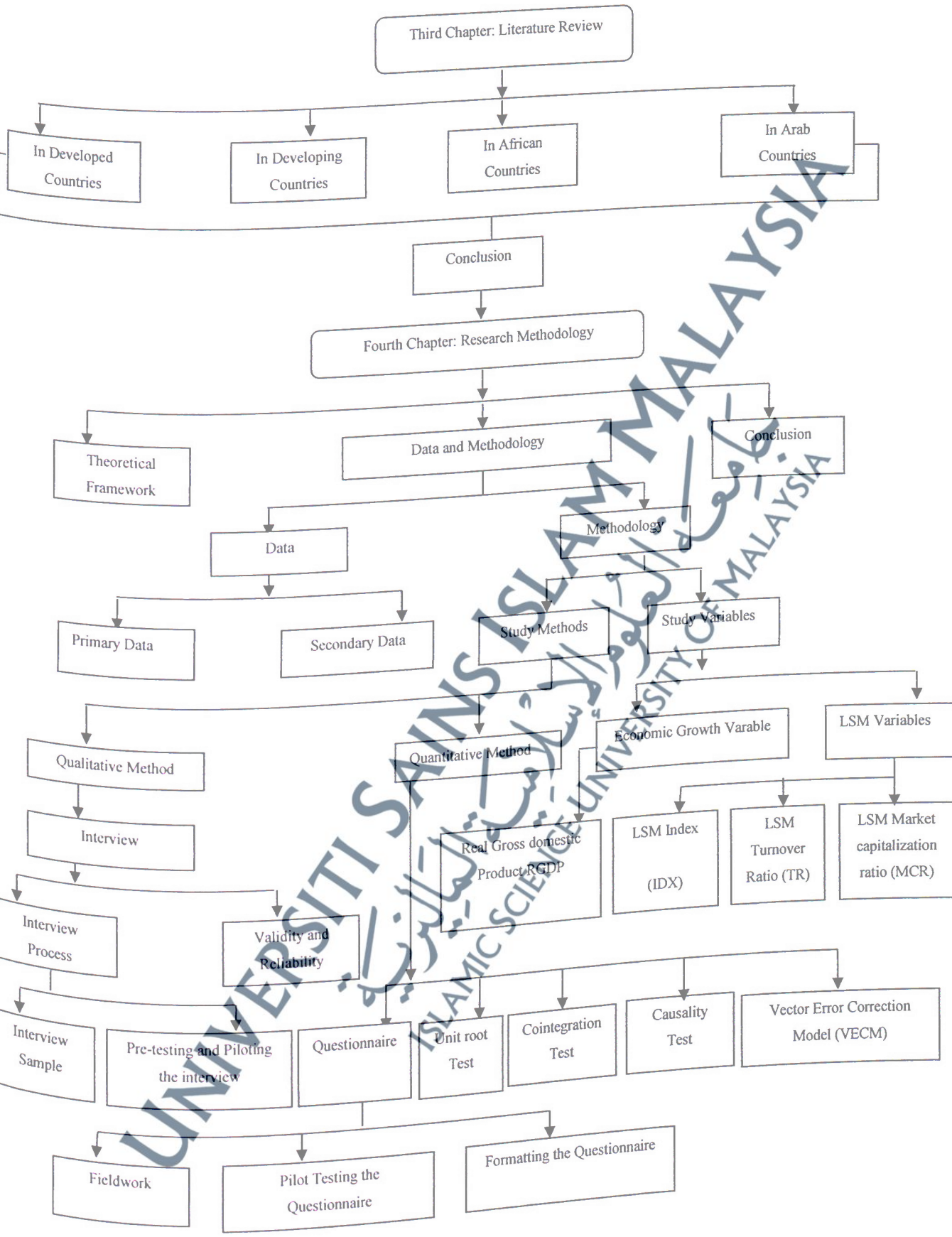
Zoubir, Y. H., & Amirah-Fernández, H. (Eds.). (2008). *North Africa: politics, region, and the limits of transformation*. Routledge.

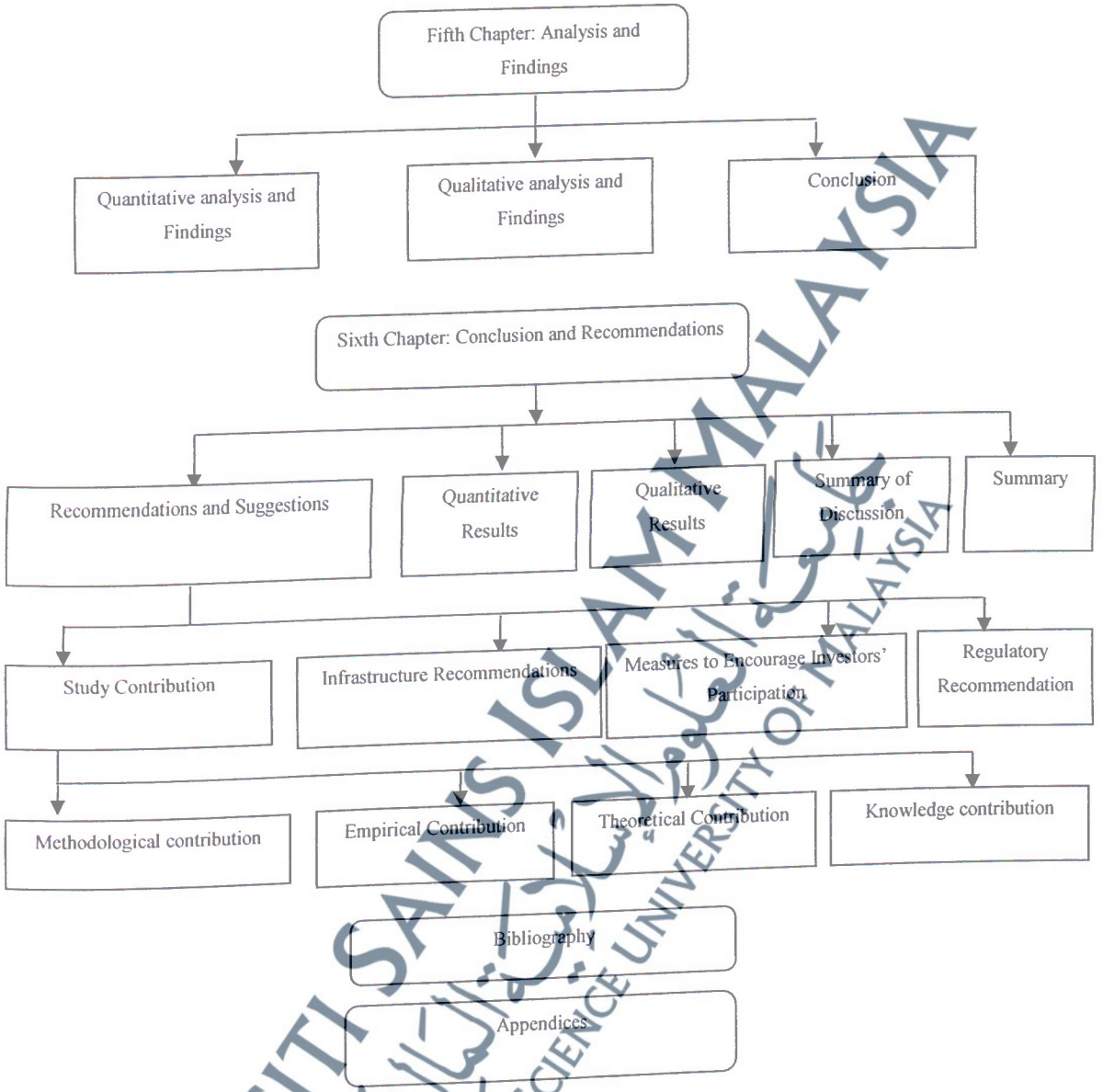
APPENDICES

APPENDIX ONE

Appendix1.1: Organization of the study







APPENDIX TWO

Appendix 2.1: Index calculation

Simple Arithmetic Average Method Index Calculation

By this method, the calculation comes from dividing the total share prices of companies involved in the sample of the index by the number of the same companies. Thus the average index price for the day is obtained which is compared with the average price on any other day, without being linked to the base price. The most important indicators following this method are the Dow Jones Industrial index (DJIA) and Nikkei-Dow Jones index (NIKKEI – DOW JONES AVE). The following equation shows the method of calculating the simple arithmetic average:

$$\text{Value of the index in a given period} = \frac{\text{Total stock prices of companies within the index sample}}{\text{The number of companies within the index sample}}$$

Computation by the Simple Index Method

Simple indicator is a statistical measure of the share price or market value compared with its rate in the base year. The examples of this type are Standard and Poor's 500 index and New York Stock Exchange (NYSE). The following equation is used to calculate the simple indicator:

$$\text{A given period} = \frac{\text{Total stock prices of companies within the index sample in a given period}}{\text{Total stock prices of companies within the index sample in a base period}}$$

Indicators differ in the ways of weighting and are used most of the capital markets. In the markets one or more of the following three methods of weighting are usually chosen:

1. Price – weighted index
2. Value – weighted index
3. Equally – weighted index

Calculation of Libyan Stock Market index (LSM index)

Libyan stock market index was launched along with the introduction of electronic trading on 3rd April 2008. The index was launched to experience it during the period of the purpose of processing and to build a real database. The database is based on factual data which reflect the market situation and give indications of the reality of the listed companies. The fair prices and logical values of these securities depend on the activity level and trading volume and ratios for each stock paper. The following equation shows how to calculate LSM index:

$$\text{The index of the current d} \frac{\text{Market capitalization of the securities included in the calculation of the index at the end of the day}}{\text{Market capitalization of the securities included in the calculation of the index at the end of the previous day}} \times \text{The index of the previous day}$$

In addition to that, all securities listed on the main table are intervention in the calculation of the index market. Thus, the main determinant of the change in the index is the participation rate of all the papers in the total shares used in the calculation of the index, along with closing prices. Therefore, these ratios should be studied and compared to the criteria that determine the classification. These non-free shares might be included in the calculation of the index and therefore these should be excluded from the process account. Besides, when these shares are included with the index calculation, it influences on the index according to the relative weight of it. The financial markets from time to time re-calculate the ratio of free shares of securities included in the calculation indicators (free shares). Modification to any change to these ratios is conducted to make these ratios in line with the real situation of the market. However, the determination of the free ratios for securities is a crucial question for Libyan economy.

There are several ways by which the stocks can be divided into free and restricted types, in order to sort out the free stocks which can be traded in the market. Some of them, for example, determines free percentages by dividing the total shares of the entity into two parts. One is classified according to the nature of investment to the owner of the share (long-term or short-term investment), which includes the shares owned by long-term investment (restricted shares). Since the process of circulation are far-fetched and are excluded from the calculation index, this classification is well

justified. In contrast, the shares which owned short-term investment nature (free shares), are involved in index calculation. There is another way to determine the free percentages based on the nature of the owner of the equity (corporate or individual). According to this classification, the shares owned by the corporate are restricted shares and excluded from the index calculation. On the other hand, the shares owned by individuals are free shares, which is involved in the index calculation.

However, these classifications may result in erroneous data, which may not reflect the nature of the share whether it is of free or restricted type. In the first method, many of the listed companies which have short-term investment nature do not trade their shares, either for buying or selling. Besides, for the second criterion, in the case where one may find that some legal companies in the stock market are selling part of its shares; now whether these shares should be classified as free shares or restricted, that is a crucial issue.

Practical example of the application of the Libyan Stock Market Index

Three models of the free percentages have been prepared in addition to the current ones including the following:

1. Classification of the shares by the investment nature of the shares owner (long and short term)

2. Classification of the share depending on the nature or type of share owner (individuals or institutions)

3. Another model was prepared basically depending on trading volumes, which included the equities that involved in the process of the index calculation. These percentages reflect what kind of trading actually occurs in the market. These percentages were calculated according to the actual trading data conducted on the equities during the period from 1st January 2009 to 30th April 2009. These percentages indicated the participation rate of each equity in the index according to the actual sizes in the market. The following table shows the percentages and also the number of shares obtained in each of the previous methods.

Table 2.1 The percentages and the number of shares obtained in each method

Stock	Statement for the free stocks of the total capital and the number of free shares and the percentage contribution of each stock in the index according to the four models											
	The old percentage	The number of the shares	The percentage of the contribution in the Index	According to the classification (Individuals and Companies)	The number of the shares	The percentage of the contribution in the Index	Based on The type of the investment (Long – Short term)	The number of the shares	The percentage of the contribution in the Index	Based on Trading Volume	The number of the shares	The percentage of the contribution in the Index
Al-Sahara Bank	33.07%	8.334.270	41.12%	20.19%	5.087.447	34.38%	48.00%	12.096.000	49.33%	-	220885	23%
Al-Wahda Bank	27.00%	2.916.000	14.39%	25.43%	2.746.033	18.56%	27.00%	2.916.000	11.89%	-	181970	19%
LSM company	30.00%	1.500.000	7.40%	20.30%	1.015.022	6.86%	25.00%	1.250.000	5.10%	-	413596	44%
Development and Commercial Bank	76.45%	3.822.250	18.86%	70.30%	3.515.110	23.75%	76.45%	3.822.500	15.59%	-	105627	11%
Al-Sahara Insurance company	25.00%	375.000	1.85%	24.01%	360.172	2.43%	44.00%	660.000	2.69%	-	10425	1%
United Insurance companies	55.35%	55.350	0.27%	59.49%	59.485	0.40%	66.50%	66.500	0.27%	-	474	0%
Libyan Insurance	35.30%	2.471.000	12.19%	11.10%	776.669	5.25%	35.30%	2.471.000	10.08%	-	10757	1%
Al Saraya for trade and Investment	39.81%	792.254	3.91%	62.24%	1.237.734	8.36%	62.23%	1.237.577	5.05%	-	4434	1%
Total	-	20.266.124	100%	-	14.797.672	100%	-	24.519.577	100%	-	948.660	100%

The above table showed the variance of the ratios' contribution in the index of each stock using different methods to determine the free percentages. Applying similar method for the index, the previous data was used to calculate the value of the Libyan Stock Market index during the period from 28th January 2009 to 17th May 2009. The results were as follows:

Table 2.2 the basic data for the calculation

The Stock	Open price	The Largest Value	The smallest value	Close price	The change in price during the closing time
16.29	17.77	14.96	16.55	16.55	1.60 %
200	212	200	212	212	6.00%
16.5	16.75	16.17	16.17	16.17	-2.00%
10.15	10.48	8.37	8.37	8.37	-17.54%
12.1	12.1	10.36	10.36	10.36	-14.38%
12.9	13.38	10.7	12.55	12.55	-2.71%
8	8.48	7.5	7.5	7.5	-6.25%
18.42	18.55	16	16.3	16.3	-11.51%

The time period of the calculation (for the sample used) is from 28/1/2009 to 17/05/2009, the trading days being 76 days. The table (10) below shows the results for each method.

Table 2.3 the results for each method

Free Ratio calculation method	Opening price	Closing price	Largest value	Lowest value	Changing average%
Old Percentage	790.58	758.57	817.43	722.66	% 4.05 -
Individuals and companies	790.58	758.70	816.91	723.93	% 4.03 -
Long and short term investment	790.58	765.75	821.27	724.51	% 3.14 -
Trading volumes	790.58	720.13	815.99	708.77	% 8.19 -

The above tables show that, all methods give nearly the same general trend of the index, slight variation occurs only depending on the volatility and sensitivity to changes. But the trading volumes are significantly affected by changes in prices, because they reflect the real proportions of the stocks contribution in daily trading of the stock market. The long-term and short-term investment methods gave the best result as a close price to the index as well as the highest value. Besides, the lowest value for the index also occurred during the period, may be because of the low securities during the period of the sample. This portion, however, does not represent a big proportion according to this classification, while the high securities have a greater share in it.

The defects of the quantitative indicators

1. The free ratios have a significant effect on the amount and direction of the index. So, any stock which has a relative weight poses an effect on the price regardless of its activity in the market. This constitutes one of the biggest defects of quantitative indicators.
2. Even in the cases when there is no difference between the relative weight of the stock and the extent of its activity, there are free percentages for each stock change according to the buying and selling operations in the market. Thus these percentages should be modified from time to time. In addition, in these cases the price does not reflect the change in the market value for the basic day period. This is also one of the defects of the quantitative indicators.

To sum up, the defects of the quantitative indicators results from the relative weights for each stock in the index value, especially when this relative weight decreased with the volume of this stock activity. To exclude the index, unjustified effect by the relative weights of the securities is involved in its equation calculation, especially if these stocks are not active and their relative weight does not reflect their activity in the market.

This situation led to the necessity of finding a new price index, according to which it can build an index equation based on the stock prices. The equation is not based on the quantitative values of the issued shares or the quantitative values of the free shares. Thus, the index price will reflect the changes in the total closing prices for these stocks. The famous examples for this type of indicators are presented by Dow Jones and Financial Times 30.

The following table shows the papers and the number of free shares used. The study will assume that the price of the previous day's close and the current market prices are as follows:

Table 2.4: The papers and the number of free shares used

Stock Paper	The quantity of free shares for each stock paper	Current closing price	Previous day's closing price
Al-Ssahara Bank	8,334,270	A	I
Al-wahda Bank	2,916,000	B	J
Libyan Stock Market Company	1,500,000	C	K
Development and Commercial Bank	3,822,250	D	L
Insurance and Al-Sahara Company	375,000	E	M
Insurance United Company	55,350	F	N
Libyan Insurance	2,471,000	G	O
Al-Sarai Bank for commercial and Investment	792,254	H	P

Source: Libyan Stock Market Publication: The stock market is preparing the launch of a new price index

Based on The previous Table LSM Index value is as follows:

$$\text{Index Value} = \frac{(A \times 8{,}334{,}270) + (B \times 2{,}916{,}000) + (C \times 1{,}500{,}000) + (D \times 3{,}822{,}250) + (E \times 375{,}000) + (F \times 55{,}350) + (G \times 2{,}471{,}000) + (H \times 792{,}254)}{(I \times 8{,}334{,}270) + (J \times 2{,}916{,}000) + (K \times 1{,}500{,}000) + (L \times 3{,}822{,}250) + (M \times 375{,}000) + (N \times 55{,}350) + (O \times 2{,}471{,}000) + (P \times 792{,}254)} \times \text{Value Index for the previo}$$

The follow table will assume some simple values as example to explain how

to calculate LSM Index

Table 2.5: some simple values as example to explain how to calculate LSM Index

Stock Paper	The quantity of free shares for each stock paper	Current closing price	Previous day's closing price
Al-Ssahara Bank	8,334,270	10.3	10
Al-wahda Bank	2,916	10	10
Libyan Stock Market Company	1,500,000	10	10
Development and Commercial Bank	3,822,250	10	10
Insurance and Al-Sahara Company	375,000	10	10
Insurance United Company	55,350	10	10
Libyan Insurance	2,471,000	10	10
Al-Sarai Bank for commercial and Investment	792,254	10	10

$$Index\ Value = \frac{(10.03 \times 8,334,270) + (10 \times 2,916) + (10 \times 1,500) + (10 \times 3,822,250) + (10 \times 375) + (10 \times 55,350) + (10 \times 2,471) + (10 \times 792,254)}{(10 \times 8,334,270) + (10 \times 2,916) + (10 \times 1,500) + (10 \times 3,822,250) + (10 \times 375,000) + (10 \times 55,350) + (10 \times 2,471) + (10 \times 792,254)} \times Value\ Index\ for\ the\ previous\ day$$

$$\text{Index Value} = \frac{(202,115,388.10)}{(201,865,360.00)} \times 1000\ points = 1001.24\ points$$

The index percentage change = 0.0012336%

The previous calculation illustrate that the value of Al-Sahara stock paper changed up from value (10) to value (10.03). The index took the same direction but its percentage is % 0.12336 approximately. So, the questions that imposes itself is: Are there any relationship among the change of the index and the change of the stock paper closing price?

Before answer this question another column which will contain the relative weight for each stock paper in the index should add to the table. The table will be as follows:

Table 2.6: The relative weight for each stock paper in the index

Stock Paper	The quantity of free shares for each stock paper	Current closing price	Previous day's closing price	relative weight for each stock paper in the index
Al-Ssahara Bank	8,334,270	10.3	10	41.12%
Al-wahda Bank	2,916,000	10	10	14.39%
Libyan Stock Market Company	1,500,000	10	10	7.40%
Development and Commercial Bank	3,822,250	10	10	18.86%
Insurance and Al-Sahara Company	375,000	10	10	1.85%
Insurance United Company	55,350	10	10	0.27%
Libyan Insurance	2,471,000	10	10	12.19%
Al-Sarai Bank for commercial andInvestment	792,254	10	10	3.91%
Total	20,266,124	---	---	100%

This percentage is calculated by dividing the number of free shares per sheet on the total stock of all securities included in the index.

Al-Sahara Bank (ASB) paper is equal 41.12% of the total quantity involved in the calculation of the equation index. = (8,334,270/20,266,124) x 100.

Al-Wahda Bank paper is equal 14.39% = (2,916,000/20,266,124) x 100

Libyan Stock Market Company = (1,500.000/20,266,124) x 100

The same way for other companies.

Thus, there is a positive correlation between the percentage of the change in the price of paper and the percentage of the change in the index, and it can be represented as follows:

• (% change in the value of the index) α is directly proportional to (% change valuable closing price of and deserts paper)

• (% change in the value of the index) = constant value x% of valuable change the paper's closing price deserts

• (% change in the value of the index) / (% change valuable closing price of and deserts paper) = a constant value

0.12336% / 0.3% = 41.12% It is equal to the relative weight of Al-Sahara paper in the index.
It is observed that the composite proportions of the total shares index varies from paper to the other and this is what influenced indicator reflects dramatically by the change in the price of paper compared to other paper.

APPENDIX THREE

3.1 English version of the interview

3.2 Arabic version of the interview

3.1 English version of the interview

FIRST THEME: LIBYAN STOCK MARKET PROBLEMS

1- Why LSM has been established very recently?
2- Are there any trading operations in 2006 and 2007?
3- Why LSM did not start its operations effectively until 2008?
4- Did the political and economic environments suitable for the establishment of the stock market?
5- Does Libyan stock market have weaknesses which prevent it from operating effectively?
6- According to the efficient market theory, what type of market that LSM fall under?

SECOND THEME: THE ROLE OF LIBYAN STOCK MARKET AND ITS PERFORMANCE IN PROMOTING ECONOMIC GROWTH.

1- Does Libyan stock market positively promote Libyan economy?
2- Why the big sectors in Libya (oil, electric, agriculture telecommunication & building) do not contribute in the market?
3- Is there any contribution of the private sector in LSM?
4- In your opinion what is the best way to make LSM more effective in promoting economic growth? Also, do you have any plans to achieve this goal?

THIRD THEME: THE PROCEDURES TAKEN TO ATTRACT LOCAL AND FOREIGN INVESTORS

1- Based on your experience in LSM, do you think that the local and foreign investors have a good contribution in LSM?
2- What are the measures taken by the market to attract local investors?
3- What are the measures taken by the market to attract foreign investors?
4- What type of investors LSM prefers, individuals or companies?
5- Do you have good advertisement to attract the investors?
6- Do you think the investors are satisfied with the services offered?
7- What are your plans to make more attraction local and foreign investors?

OPEN END QUESTION

Do you have anything you want to add or any recommendation to enhance the role of LSM in promoting economic growth?

3.2 : Arabic version of the interview

المقابلـــــــــة الشخصية

المحموعة الاولى: مشاكل سوق المال الليبي

1- لماذا تم إنشاء سوق المال الليبي حديثا جدا؟

2- هل كانت هناك أي عمليات تداول خلال عامي 2006 و 2007؟

3- لماذا لم يبدأ السوق عمليات التداول إلا في عاد 2008؟

4- هل كانت البيئة السياسية والإقتصادية في ليبيا ملائمة لإنشاء سوق الاوراق المالية الليبي؟

5- هل هناك نقاط ضعف تمنع سوق المال الليبي من أداء عمليات التداول بشكل جيد؟

6- وفقا لنظرية كفاءة السوق، تحت أي نوع من الأسواق يندرج سوق المال الليبي؟

المجموعة الثانية: العلاقة بين سوق الاراق المالية الليبي والنمو الإقتصادي

1- هل يؤثر سوق المال الليبي إيجابيا على الإقتصاد الليبي؟

2- لماذا لا تساهم القطاعات الكبيرة في الإقتصاد الليبي (النفط ، الكهرباء ، الإتصالات ، الزراعة ، والبناء) في سوق المال الليبي ؟

3- هل هناك مساهمة للقطاع الخاص في سوق المال الليبي؟

4- في رأيك ... ما هي أفضل الطرق لجعل سوق المال الليبي أكثر فعالية في دعم الإقتصاد الليبي ؟ وهل لديكم خطط لتحقيق هذا الهدف؟

المجموعة الثالثة: الإجراءات التي تم اتخاذها من قبل إدارة سوق الأوراق المالية الليبي من أجل استقطاب المستثمرين المحليين والأجانب

1- بناءاً على تجربتك وخبرتك في سوق المال الليبي هل للمستثمرين المحليين والأجانب أية مساهمة في السوق؟

2- ما هي الإجراءات التي اتخذها سوق الأوراق المالية الليبي لإستقطاب المستثمرين المحللين؟

3- ما هي الإجراءات التي اتخذها السوق لاستقطاب المستثمرين الاجانب؟

4- أي نوع من المستثمرين هو المفضل في سووق الاوراق المالية الليبي ، الافراد او اشركات؟

5- هل لديكم دعاية كافية لإستقطاب المستثمرين المحليين؟

6- هل تعتقد أن المستثمرين راضون عن خدمات السوق؟

7- ما هي خطط السوق لاستقطاب المزيد من المستثمرين المحليين والأجانب؟

سؤال مفتـــــوح

هل لديك أي شيء تريد إضافته، او أية توصية من شأنها أن تعزز دور سوق الأوراق المالية الليبي في دعم الإقتصاد الليبي؟

APPENDIX FOUR

QUESTIONNAIRE

4.1 Covering Letter sent from the researcher to the participants in LSM Benghazi Branch participants with the Self-administered Questionnaires

4.2 The suggestions of a group of specialists in economics and statistics about the questionnaire

4.3 The English version of the Questionnaire

4.4 The Arabic Version of the Questionnaire

4.5 Survey questionnaire analysis output

APPENDIX 4.1: Covering Letter sent from the researcher to the participants in LSM Benghazi with the survey Questionnaires

University Sains Islam Malaysia USIM

The Role of stock Market Development in Promoting the Economic growth: A case Study in Libya

QUESTIONNAIRE SURVEY

(This letter sent to the respondents in Benghazi branch)

Dear Participant

I am a PhD candidate currently studying in the Faculty of Economics and Muamalat of University Sains Islam Malaysia, conducting research into " The Role of Stock Market Development in Prompting the Economic Growth: A case study in Libya".

Aim of Questionnaire

The primary objective of this questionnaire to know the role of Libyan stock Market (LSM) in promoting economic growth in Libya. There are other two aims of it which are to evaluate the performance of LSM, and the procedures taken by it to attract local and foreign investors to arrive to the good contribution of the LSM in Libyan economy.

Non-Response to Questions

If you feel unable to answer any questions, please leave them blank or insert comments 'Don't know'. If you wish to make additional comments at any point please feel free to do so either by using by providing a covering note.

Outcome

All responses will be treated confidently. The results of the questionnaire will be used for research purposes only and there will be no attempt to identify an individual or

organisation. I would very much gratitude your participation, since the success of this research depends upon your response.

Instructions

Please try to answer every question; there are no right or wrong answers. I am seeking your judgement or opinion only. The questionnaire consists of 5 pages and should take no longer than 30 minutes to complete. I very much hope you will be able to participate and I feel sure that you will find the subject matter interesting. Thank you very much for your help in advance. Please return the completed questionnaire in the addressed envelope provided. I look forward to receiving your reply.

Yours faithfully

Amna Edweib

University Sains Islam Malaysia

Email: amna.khalifa71@yahoo.com

APPENDIX 4.2 The suggestions of a group of specialists in economics and statistics about the questionnaire

Trans from Arabic

State of libya
Ministry Of High Education & Scientific Research
Aljabal Algharbi University
Faculty of Accounting

Date 30/10/2013

To whow it may concern :-

Faculty of accounting Gharyan Al Jabal Algharbi University to inform you that the incoming questionaire to us which included group of questions about stock exchange in the Libyan economy has been seen and revised by both of :

1. Dr Slah Addeean Enbaya Giuma — Specialization / economies
2. Dr Emhemed Ali Saleh Abu Ghalya — Specialization / econor ies

And it assures the opinions of above mentioned specialized professors which mentioned in their attached comment to you that the questionaaire is valid to complete doctorate dissertation.

In the field of economics

Dean of faculty

وزارة التعليم العالي والبحث العلمي

كلية ... المحاسبة ...

التاريخ: 30/10/2013 م

إلى من يهمه الأمر

. . . بعد التحية،،،

بهذا تفيدكم كلية المحاسبة غريان / جامعة الجبل الغربي، بأن الاستبيان الوارد إلينا والذي أحتوى على مجموعة أسئلة حول سوق الأوراق المالية في الاقتصاد الليبي تم الاطلاع عليه ومراجعته من قبل كل من :

1- د . صلاح الدين أمية جمعة التخصص / اقتصاد

2- د . أحمد علي صالح أبو غالية التخصص / الاقتصاد

وتؤكد آراء الاساتذة المتخصصين المذكورين أعلاه والتي وردت في تعليقاتهم المرفقة لكم بأن الاستبيان يصلح لاستكمال أطروحة الدكتوراه في مجال الاقتصاد .

متمنيين لكم التوفيق والنجاح

والسلام عليكم ورحمة الله وبركاته

2013/10/30

د. صلاح الدين إمية جمعة

عميد الكلية

الرقم - ٣ - ج - ٥٧٤

التاريخ - ٣٠ - ١٠ - ٢٠١٣

التوقيع

صورة الى

- مكتب العميد
- المسجل العام
- كراسة صلاح وصفاء

Trans from Arabic

Ministry of High Education
Al Jabal Algarbi University
Faculty of Accounting / Gharian

To whow it may concern :

After the sight on questionnaire from related to project of research titled (the role of money markets in supporting economic growth -anapplied study in I ibyan stock exchange) demonstrates that the questions included in this from is generally valid to conduct the study related to practical side of doctorate dissertation whic is being prepared by the researcher and that after covering theoretical side related to research subject aswell as we metione some notes that can help researcher to add sowe question which serve research subject most important as fllows :-

First: concentration on the role of stock exchange market which has mediator role between saving channels and investment channels and the relationsip of that economic growth because this is the title of dissertation

Second: it mightbe useful adding some questions which demonstrate role of stock exchange maket in increasing in the fields based on studying the real demand which leads to iocreasing the added value (real growth) thus role of financial marked is not limite with only the financial investment (wich depends upon speculation and transfere of financial assets without leading that to real growth in national economy).

Thied : pointing to the difference between primary markets and secondary markets. It is know that primary market is te market of issuance in which the primary issue or the new issue is sold in but the secondary market it is market of exchange specialized with reselling and buying financial assets and securities and speculation especially in short run thus it may not least to real production however there are several point of views which consider that the secondary market has encourage and stimulating role to the primary marketon increasing the new issuances therefore encouraging and increasing investmeut through the

work of the tow mechanisms of accelerator and multiplicator (we let for researcher how to manipulate that through the questionaire).

Fourth: sight and understanding of the subject or the financial derivatives problem which suffer from it most of stock exchange market especially in advanced countries and its negative role on Economic growth.

Finally, we replicate that this questionnaire is valid to prepare the study related to practical side of study. These notes just only trial to enhance questionnaire from with some questions thought of any researcher we leave for the researcher freedom of taking these notes or not and I ope good luck for the researcher

Dr/Emhemed Ali Abu Ghalya
Head of Economics Debartment
Faculty of Accounting

دولة ليبيا

وزارة التعليم والبحث العلمي

جامعة الجبل الغربي

كلية المحاسبة / غريان

إلى من يهمه الأمر،،،،

بعد الاطلاع على استمارة الاستبيان الخاصة بمشروع البحث المعنون بـــــ (دور اسواق المال في دعم النمو الاقتصادي – دراسة تطبيقية في سوق الاوراق المالية الليبي)، تبين إن الاسئلة التي تضمنتها هذه الاستمارة تصلح بشكل عام لإجراء الدراسة المتعلقة بالجانب العملي من اطروحة الدكتوراه التي يقوم الباحث باعدادها، وذلك بعد تغطية الجانب النظري المتعلق بموضوع البحث، كما نورد بعض الملاحظات التي قد تساعد الباحث على إضافة بعض الأسئلة التي تخدم موضوع البحث أهمها ما يلي :-

أولاً / التركيز على دور السوق المالي الذي يقوم بدور الوسيط بين قنوات الادخار وقنوات الاستثمار وعلاقة ذلك بالنمو الاقتصادي لأن هذا هو عنوان الأطروحة.

ثانياً / قد يكون من المفيد إضافة بعض الأسئلة التي تبين دور السوق المالي في زيادة الاستثمار في المجالات المبنية على دراسة الطلب الحقيقي الذي يؤدي إلى زيادة القيمة المضافة (نمو حقيقي)، بحيث لا يقتصر دور السوق المالي على الاستثمار المالي فقط (الذي يعتمد على المضاربة ونقل ملكية الاصول المالية دون ان يؤدي ذلك الى نمو حقيقي في الاقتصاد الوطني).

ثالثاً / الإشارة إلى الفرق بين السوق الأولية والسوق الثانوية ، فمن المعروف ان السوق الأولية هي سوق الإصدار التي يباع فيها الإصدار الأول أو الإصدار الجديد، أما السوق الثانوية فهي سوق تداول تختص بإعادة بيع وشراء الاوراق والاصول المالية والمضاربة وخاصة في الأجل القصير، وبالتالي قد لا تؤدي بالضرورة إلى إنتاج حقيقي، ومع ذلك توجد العديد من وجهات النظر التي ترى أن للسوق الثانوية دور تحفيزي ومشجع للسوق الاولية على زيادة الإصدارات الجديدة ومن ثم تشجيع وزيادة الاستثمار من خلال عمل آلية التضاعف والمعجل (نترك للباحث كيفية معالجة ذلك من خلال الاستبيان).

رابعاً / الالمام والإطلاع على موضوع او مشكلة المشتقات المالية التي تعاني منها معظم الاسواق المالية ولاسيما في الدول المتقدمة ودورها السلبي على النمو الاقتصادي.

وفي الختام نكرر أن هذا الاستبيان يصلح لاعداد الدراسة المتعلقة بالجانب العملي من الدراسة، وما هذه الملاحظات الا محاولة لتعزيز استمارة الاستبيان ببعض الاسئلة التي قد تغيب عن أي باحث، ونترك للباحث حرية الأخذ بهذه الملاحظات من عدمه، وأتمنى كل التوفيق للباحث.

والسلام عليكم ورحمة الله،،،

د- إمحمد علي أبوغالية

رئيس قسم الاقتصاد بكلية المحاسبة

Trans from Arabic

Ministry of High Education
Al Jabal Algarbi University
Faculty of Accounting / Gharian

To whow it may concern :

In the time we salute you and we appreciate your paid efforts in preparation of questionnaire from which was devoted to study the reality of stock exchange market in Libyan economy after sight upon that and according to complete transparency we would like to inform you the following :

1. The questionnaire leve with its specialized and diversified questions is considered at doctorate level and appropriate to complete the study about stock exchange market in Libyan economy.
2. Because of the importance of specialization in answering and accuracy of results it is required to put the specialization in the first page of questionnaire (general information).
3. during distribution of questionnaire in order to be the results accurate and valid it is necessary to distribute on society sample specialized in economies and it has experience about stok exchange market, nature of its work and its mechanisms, other wise on the contrary of that probability of error could be large which reduces the importance of results in the research.
4. it is necessary to answer the following question :-

Does the stock exchange market in Libyan economy agree with limits of Islamic rulings (shareiat) ?

In case of negative that means the market role declines in deve loping of Libyan economy and it may have opposite results

Good Luck for You

Dr/Salah Enbayah Giuma
Economics Department.

وزارة التعليم العالي

جامعة الجبل الغربي /كلية المحاسبة / غريان

إلى من يهمه الأمر

في الوقت الذي نحييكم فيه و نثمّن جهودكم المبذولة في إعداد إستمارة الاستبيان التي خصصت لدراسة واقع سوق الأوراق المالية في الاقتصاد الليبي، وبعد الإطـــلاع عـــن ذلك ومن باب التفاقية الكاملة نود إفادتكم بما يلي :-

1- إن مستوى الاستبيان بأسئلته المتنوعة والمتخصصة يعتبر عند مستوى الدكتوراه ويصلح لاستكمال الدراسة حول سوق الأوراق المالية في الإقتصاد الليبي.

2- نظرا لأهمية التخصص في الإجابة ودقة النتائج يتطلب في الصفحة الأولى مـــن الاستبيان (المعلومات العامة) وضع التخصص .....

3- عند توزيع الاستبيان لتكون النتائج دقيقة وصحيحة لابد من أن يتم التوزيع علـــى عينة من المجتمع متخصصة في الإقتصاد ولها دراية بسوق الأوراق المالية ، من حيث طبيعة عمله وآليته ، حيث عكس ذلك يكون احتمال الخطأ كبير مما يقلـــل من أهمية النتائج في البحث .

4- لابد من الإجابة على السؤال التالي :-

" هل سوق الأوراق المالية في الإقتصاد الليبي يتفق مـــع حـــدود الـــشريعة الإسلامية ؟ حيث في حالة النفي يعني أن السوق يتضاءل دوره في تنميـــة الإقتـــصاد الليبي وقد تكون له نتائج عكسية .

ونسأل الله أن يوفقكم

والسلام عليكم ورحمة الله وبركاته

د. صلاح أنبية جمعة

عضو هيئة تدريس بقسم الاقتصاد

DR. salahlnbaya2003@yahoo.com

00218927446843

التوقيع.....

الدار الوطنية للاستشارات
الاقتصادية و الفنية والتدريب

E-Mail: jam555@yahoo.com
Tel: +218913012004

التوقيع: .....
التاريخ: 10 09 2013

إفادة

الى من يهمه الامر

تفيدكم ادارة الدار الوطنية للاستشارات الفنية والتدريب بأن الباحث:

امنة خليفة سالم الدويب

Amna Khalifa Salem Edweib

عنوان الرسالة:

"دور تطور سوق المال في النمو الاقتصادي: دراسة حالة في ليبيا "

"The Role of Stock Market Development in Ecoinomics Growth: The Case Study in Libya"

قد قام بتحكيم اداة الدراسة (من الناحية الاحصائية)، وكذلك إجراء التحليل الاحصائي للجزء المتعلق بالبيانات الاحصائية، وقراءتها وتفسير النتائج وذلك تحت إشراف وتوجيه ومساندة الدكتور: جمال محمد انديرة، محاضر بقسم الإحصاء- جامعة طرابلس.

والسلام عليكم ورحمه الله وبركاته

د. محمد السلام عبد اللطيف [illegible]
مدير عام الدار الوطنية

د. جمال محمد انديرة
محاضر بقسم الاحصاء - جامعة طرابلس

APPENDIX 4.3: English version of the survey questionnaire

Dear Participant

I am a PhD student at the Islamic Science University Malaysia, Faculty of Economics and Muamalat, in the field of stock markets. This research aims mainly to identify the extent of the role of capital market in support of the Libyan economic growth in Libya. For the purpose of completing the field study for this search, there will be a set of findings and recommendations that would activate this role through a range of procedures. This topic has been chosen because of its active role in contributing to the growth of the Libyan economy and the rare of studies in this area.

Supporting from you to set up specialized scientific research in all fields, and because of the importance of such research at various levels, the researcher presents his research project entitled (The role of stock markets development in promoting economic growth - A case study in the Libya).

Accordingly, we put between your hands the attached questionnaire hoping you contribute to the success of this project, and we would like from your Excellency give this questionnaire part of your valuable time to answer the questions carefully and accurately, with the knowledge that the data and information which you provide will be used in scientific purposes and will take into account the strict confidentiality of circulation.

Thankful in advance for your cooperation with us

Peace be upon you and God's mercy and blessings.

FIRST PART

GENERAL INFORMATION

1- **Gender:** Male ..... Female .....

2- **Functional capacity .....**

3- **Study level**

Secondary school or equal .....

Undergraduate ..... Masters ..... PhD .....

4- **The years of experience**

One to three years .....

Four to six years .....

Seven years to more .....

Amna Khalifa Salem Edweib

University Sains Islam Malaysia

Faculty of economics and Muamalat

Email: amna.khalifa71@yahoo.com

SECOND PART

FIRST GROUP: RELATIONSHIP BETWEEN LIBYAN STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH

1- Stock Market has a positive role in economic growth

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

2- Stock Market has a small role in economic growth

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

3- Libyan citizen has enough idea about LSM and its operations

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

4- Libyan Stock Market is keen to gain the confidence of the people who dealing with them and protect them from fraud

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

5- Stock market is not working on the application of the principle of transparency of clearing and settlement

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

6- Libyan Stock Market operates routinely, without specifying any targets for the future

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

7- Transparency and disclosure have an important role in LSM operations

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

8- Libyan Stock Market has future plans to support the Libyan economy better than now

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

SECOND GROUP: INVESTORS

1- Local investor doesn't have any contribution in LSM operations

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

2- There is no contribution from the foreign investors (institutions and persons) in LSM operations

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

3- The stock market is very interested in the needs and wishes of its investors

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

4- The impression of the investors about LSM is very positive

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

5- Some investors feel remorse for their investment in the Libyan Stock Market

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

6- Libyan Stock Market provides information to all investors without discrimination (with prevent their diversion for some investors)

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

7- Big investors have more chance to get the information more than the other investors cause of their relations with the LSM members

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

8- LSM provides accurate information to investors, but it is incomplete

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

9- Libyan Stock Market provided its Information by difficult way which small investors can't understand it easily.

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

THIRD GROUP: RELATIONSHIP BETWEEN STOCK MARKET VARIABLES AND THEIR EFFECT ON LIBYAN STOCK MARKET PROFITS.

1- In general the increasing of turnover ratio has positive effects on the profits of the stock market

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

2- When the market capitalization ratio increases, this will lead to the decrease of turnover ratio

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

3- Some companies prefer not to distribute profits. Because they need those profits in expansion and growth and add those profits to the book value, which increases the share price in the market significantly. The companies called growth companies

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

4- The achievement of the company and retained earnings without distribution will lead to higher book value of the shares and thus increase the market value of it

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

5- Turnover Ratio is directly proportional to the total value of shares traded and inversely with Market Capitalization Ratio

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

6- Turnover ratio consider as most important criteria that must be taken by investors before making an investment decisions. Also it is one of the criteria

differentiation not only among listed shares in a market but beyond that to include differentiation among different financial markets for foreign investors

Strongly disagree	Disagree	Don't know	Agree	Strongly agree

الإستبيـــــــان

جامعة العلوم الإسلامية الماليزية – ماليزيا

University Sains Islam Malaysia

كلية الإقتصاد والمعاملات - قسم الإقتصاد

أخي الكريم / أختي الكريمة

السلام عليكم ورحمة الله وبركاته

بعد التحية

أنا طالبة دكتوراه في جامعة العلوم الإسلامية الماليزية, كلية الإقتصاد والمعاملات, تخصص مالية في مجال أسواق المال. يهدف هذا البحث بشكل رئيسي إلى التعرف على مدى دور سوق المال الليبي في دعم النمو الإقتصادي في ليبيا. ولغرض استكمال الدراسة الميدانية لهذا البحث , ستكون هناك مجموعة من النتائج والتوصيات التي من شأنها تفعيل هذا الدور من خلال مجموعة من الإجراءات. وقد تم اختيار هذا البحث لما له من دور فعال في المساهمة في نمو الإقتصاد الليبي, ولندرة الدراسات الميدانية في هذا المجال من جهة أخرى.

ودعما منكم للجهود المبذولة لإعداد البحوث العلمية المتخصصة في كافة المجالات ونظرا لأهمية تلك البحوث على مختلف المستويات فإن الباحث يقدم مشروع بحثه بعنوان

(دور أسواق المال في دعم النمو الإقتصادي – دراسة تطبيقية في سوق الأوراق المالية الليبي)وذلك لنيل درجة الدكتوراه في الإقتصاد.

عليه نضع بين أيديكم إستمارة الإستبيان المرفقة آملين منكم المساهمة في إنجاح هذا المشروع, ونود من سعادتكم مشكورين إعطاء هذه الإستبانة جزء من وقتكم الثمين بالإجابة على الأسئلة بكل عناية ودقة ، مع العلم بأن البيانات والمعلومات التي ستقدمونها سيتم إستخذامها في الأغراض العلمية وسيراعى فيها السرية التامة من ناحية تداولها.

شاكرين سلفا حسن تعاونكم معنا

والسلام عليكم ورحمة الله وبركاته

الجزء الأول: معلومات عامة

1- الجنس : ذكر ..... أنثى .....

2- الصفة: .....

3- المستوى الدراسي: - شهادة ثانوية أو ما يعادلها ..... - بكالوريوس ..... -

- ماجستير ..... - دكتوراه .....

4- الخبرة :

- من سنة إلى ثلاث سنوات .....

- من أربع إلى ست سنوات .....

- سبع سنوات فأكثر .....

آمنة خليفة سالم الدويب

جامعة العلوم الإسلامية الماليزية

كلية الإقتصاد والمعاملات

Email: amna.khalifa71@yahoo.com

الجزء الثاني: أسئلة الإستبيان

المجموعة الأولى: تطور سوق الأوراق المالية الليبي والنمو الإقتصادي

1- لسوق المال الليبي دوركبير جدا في النمو الإقتصادي في ليبيا.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

2- لسوق المال الليبي دور بسيط لا يكاد يذكر في المنو الإقتصادي في ليبيا.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

3- المواطن الليبي لديه فكرة كافية عن كيفية عمل سوق سوق الأوراق المالية الليبي

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

4- يحرص سوق الأوراق المالية الليبي على كسب ثقة المتعاملين معه وحمايتهم من الإحتيال.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

5- لا يطبق سوق الأوراق المالية الليبي مبدأ المقاصة والتسوية بشفافية.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

6- يعمل سوق الأوراق المالية بشكل روتيني دون تحديد لأية أهداف مستقبلية.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

7- تلعب الشفافية والإفصاح دور مهم في قيام السوق بعملياته.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

8- هناك خطط مستقبلية للسوق لدعم الإقتصاد الليبي بسكل أفضل.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

المجموعة الثانية : المستثمرون

1- ليس للمستثمر المحلي أي دور يذكر في سوق المال الليبي.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

2- ليس للمستثمر الأجنبي (أفراد ومؤسسات) أي دور في سوق الأوراق المالية الليبي.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

3- يهتم سوق الأوراق المالية الليبي بآراء ورغبات مستثمريه.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

4- إنطباعات المستثمرين عن أداء البورصة الليبية إيجابي جدا.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

5- يشعر بعض المستثمرين بالندم للإستثمار في سوق الأوراق المالية الليبي.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

6- يتيح سوق الأوراق المالية الليبي المعلومات لجميع المستثمرين دون تمييز (منع تسريبها للبعض).

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

7- كبار المستثمرين لديهم فرصة أكبر للأستفادة من المعلومات بعلاقاتهم الشخصية مع العاملين بالبورصة الليبية.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

8- يقدم سوق الأوراق المالية معلومات صحيحة للمستثمرين ولكنها غير كاملة.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

9- معلومات البورصة الليبية تقدم بصورة صعبة لايستطيع صغار المستثمرين فهمها بسهولة.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

المجموعة الثالثة: العلاقة بين متغيرات سوق الأوراق المالية وتأثيرها على أرباح الشركات وسوق الأوراق المالية.

1- بشكل عام معدل دوران السهم له آثار إيجابية على أرباح سوق المال الليبي.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

2- عندما ترتفع القيمة السوقية لسوق الاوراق المالية الليبي فإن هذا سوف يؤدي إلى انخفاض معدل دوران السهم.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

3- بعض الشركات تفضل عدم توزيع الأرباح لأنهم يحتاجون تلك الأرباح في التوسع والنمو وإضافة تلك الأرباح إلى القيمة الدفترية، مما يزيد من سعر السهم في السوق بشكل كبير

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

4- عندما تبقي الشركة الأرباح المحتجزة دون توزيع، وهذا سوف يؤدي إلى ارتفاع القيمة الدفترية للسهم، وبالتالي زيادة القيمة السوقية لذلك.

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

5- معدل دوران السهم يتناسب عكسيا مع نسبة إلى القيمة السوقية

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

6- معدل دوران السهم يعتبر من اهم المعايير التي يجب اتخاذها من قبل المستثمرين قبل اتخاذ القرارات الاستثمارية. كما أنها واحدة من معايير المفاضلة ليس فقط فيما بين الأسهم المدرجة في السوق ولكن أبعد من ذلك لتشمل المفاضلة بين الأسواق المالية المختلفة للمستثمرين الأجانب

أوافق بشدة	أوافق	لا أدري	لأ أوافق	لا أوافق بشدة

APPENDIX 5

5.1 Original data of the study variables

5.2 Interpolate Real DGP from yearly to monthly

5.3 Unit Root Test

5.4 Cointegration test

5.5 Granger Causality Test

5.6 VAR Modelling

5.1 Original data of the LSM variables and interpolated data of RGDP

Month	RGDP (Interpolated)	Market Capitalization Value	Market Capitalization Ratio %	Turnover Ratio %	Index %
2008M04	49,578,562,65	1,873,176,544.84	0.038	0.09	1151.10
2008M05	49,763,992,65	1,085,029,393.50	0.022	0.19	1153.71
2008M06	49,928,165,54	783,118,757.15	0.016	0.71	898.93
2008M07	50,066,829,90	993,696,002.62	0.020	0.51	926.89
2008M08	50,175,734,31	966,570,397.00	0.019	0.38	880.37
2008M09	50,250,627,34	944,649,037.20	0.019	0.16	859.60
2008M10	50,287,257,59	882,220,697.25	0.018	0.37	793.32
2008M11	50,281,373,61	836,695,464.00	0.017	0.20	768.92
2008M12	50,228,724,00	874,780,997.50	0.017	0.47	796.75
2009M01	50,128,212,76	865,161,464.00	0.017	0.03	785.30
2009M02	49,991,365,66	895,709,464.00	0.018	0.03	813.85
2009M03	49,832,863,90	896,675,117.00	0.018	0.29	870.23
2009M04	49,667,388,67	894,956,464.00	0.018	0.30	786.34
2009M05	49,509,621,18	818,167,436.21	0.017	0.26	728.32
2009M06	49,374,242,62	776,468,997.50	0.016	0.40	700.07
2009M07	49,275,934,20	1,907,985,546.88	0.039	0.19	698.34
2009M08	49,229,377.10	2,861,110,724.55	0.058	0.10	1018.79
2009M09	49,249,252.53	2,889,306,724.55	0.059	0.33	1042.52
2009M10	49,350,241.70	2,755,894,724.55	0.056	0.75	1133.48
2009M11	49,547,025.79	2,719,770,318.05	0.055	0.15	1106.39
2009M12	49,854,286.00	2,654,819,829.50	0.053	1.19	1104.28
2010M01	50,277,354.00	2,372,951,771.00	0.047	0.62	1111.61
2010M02	50,784,163.29	2,654,819,829.50	0.052	0.18	1195.61
2010M03	51,333,297.84	2,810,870,771.50	0.055	0.31	1302.10
2010M04	51,883,341.62	3,262,132,214.08	0.063	0.31	1417.00
2010M05	52,392,878.59	3,244,628,834.62	0.062	0.24	1375.73
2010M06	52,820,492.72	3,123,120,512.74	0.059	0.24	1344.63
2010M07	53,124,767.97	2,940,481,505.00	0.055	0.14	1283.80
2010M08	53,264,288.32	3,579,513,627.90	0.067	0.19	1323.76
2010M09	53,197,637.73	3,579,513,628.00	0.067	0.12	1295.04
2010M10	52,883,400.17	3,468,998,525.20	0.066	0.15	1298.28
2010M11	52,280,159.60	3,440,188,457.10	0.066	0.16	1285.07
2010M12	51,346,500.00	3,767,773,648.00	0.073	0.14	1354.37
2011M01	50,053,072.37	3,902,719,647.50	0.078	0.23	1425.24
2011M02	48,418,795.93	3,878,783,692.44	0.080	0.37	1479.92

Appendix 5.2: Interpolate Real DGP from yearly to monthly

$$\begin{cases} 48709300 + \frac{153654673}{672}\,cubic - \frac{22855643}{32256}\,cubic^3 & cubic < 12 \\ \frac{1211187749}{28} + \frac{1069690579}{672}\,cubic - \frac{152672651}{1344}\,cubic^2 + \frac{236778373}{96768}\,cubic^3 & cubic < 24 \\ \frac{4830132357}{28} - \frac{9787143245}{672}\,cubic + \frac{107437643}{192}\,cubic^2 - \frac{24739177}{3584}\,cubic^3 & cubic < 36 \\ -\frac{5466936591}{14} + \frac{21740867833}{672}\,cubic - \frac{499746335}{672}\,cubic^2 + \frac{499746335}{96768}\,cubic^3 & otherwise \end{cases}$$

Appendix 5.3: Unit Root Test

Null Hypothesis: L_GDPR has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.578341	0.2918
Test critical values:	1% level	-4.284580	
	5% level	-3.562882	
	10% level	-3.215267	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L_GDPR)

Method: Least Squares

Date: 09/09/13 Time: 21:23

Sample (adjusted): 2008M08 2011M02

Included observations: 31 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
L_GDPR(-1)	-0.020925	0.008116	-2.578341	0.0162
D(L_GDPR(-1))	2.926604	0.165357	17.69872	0.0000
D(L_GDPR(-2))	-3.040531	0.383570	-7.926927	0.0000
D(L_GDPR(-3))	1.187249	0.252351	4.704758	0.0001
C	0.515283	0.199796	2.579048	0.0162
@TREND(2008M04)	1.15E-05	9.45E-06	1.212794	0.2365

R-squared	0.999790	Mean dependent var	-0.001080
Adjusted R-squared	0.999747	S.D. dependent var	0.009890
S.E. of regression	0.000157	Akaike info criterion	-14.50630
Sum squared resid	6.18E-07	Schwarz criterion	-14.22875
Log likelihood	230.8477	F-statistic	23749.78
Durbin-Watson stat	1.410138	Prob(F-statistic)	0.000000

Null Hypothesis: D(L_GDPR) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.924496	0.0233
Test critical values:	1% level	-4.296729	
	5% level	-3.568379	
	10% level	-3.218382	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L_GDPR,2)

Method: Least Squares

Date: 09/09/13 Time: 21:23

Sample (adjusted): 2008M09 2011M02

Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(L_GDPR(-1))	-	0.010710	-3.924496	0.0006

D(L_GDPR(-1),2)	0.042032 2.255165	0.195035	11.56290		0.0000
D(L_GDPR(-2),2)	- 1.984593	0.395855	-5.013432		0.0000
D(L_GDPR(-3),2)	0.878250	0.248871	3.528935		0.0017
C	0.000211	8.86E-05	2.382959		0.0254
@TREND(2008M04)	-1.17E-05	4.84E-06	-2.426660		0.0231

R-squared	0.997774	Mean dependent var	-0.001179
Adjusted R-squared	0.997310	S.D. dependent var	0.002818
S.E. of regression	0.000146	Akaike info criterion	-14.64667
Sum squared resid	5.13E-07	Schwarz criterion	-14.36643
Log likelihood	225.7000	F-statistic	2151.073
Durbin-Watson stat	2.075914	Prob(F-statistic)	0.000000

Null Hypothesis: L_MCR has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.791188	0.2102
Test critical values:	1% level	-4.262735	
	5% level	-3.552973	
	10% level	-3.209642	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L_MCR)

Method: Least Squares

Date: 09/09/13 Time: 21:25

Sample (adjusted): 2008M06 2011M02

Included observations: 33 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
L_MCR(-1)	-0.310004	0.111065	-2.791188	0.0092
D(L_MCR(-1))	0.312367	0.144431	2.162740	0.0389
C	-1.319547	0.486878	-2.710219	0.0112
@TREND(2008M04)	0.017593	0.006977	2.521554	0.0174

R-squared	0.278512	Mean dependent var	0.039434
Adjusted R-squared	0.203875	S.D. dependent var	0.195519
S.E. of regression	0.174453	Akaike info criterion	-0.541108
Sum squared resid	0.882584	Schwarz criterion	-0.359713
Log likelihood	12.92828	F-statistic	3.731571
Durbin-Watson stat	1.892722	Prob(F-statistic)	0.022056

Null Hypothesis: D(L_MCR) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.716565	0.0033
Test critical values:	1% level	-4.262735	

5% level	-3.552973
10% level	-3.209642

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(L_MCR,2)
Method: Least Squares
Date: 09/09/13 Time: 21:26
Sample (adjusted): 2008M06 2011M02
Included observations: 33 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(L_MCR(-1))	-0.746346	0.158239	-4.716565	0.0001
C	0.027029	0.072650	0.372036	0.7125
@TREND(2008M04)	0.000380	0.003613	0.105106	0.9170

R-squared	0.434792	Mean dependent var	0.017479
Adjusted R-squared	0.397111	S.D. dependent var	0.248811
S.E. of regression	0.193191	Akaike info criterion	-0.363764
Sum squared resid	1.119686	Schwarz criterion	-0.227718
Log likelihood	9.002103	F-statistic	11.53889
Durbin-Watson stat	2.009073	Prob(F-statistic)	0.000192

Null Hypothesis: L_STVR has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.823000	0.0274
Test critical values:	1% level	-4.252879	
	5% level	-3.548490	
	10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L_STVR)

Method: Least Squares

Date: 09/09/13 Time: 21:27

Sample (adjusted): 2008M05 2011M02

Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
L_STVR(-1)	-0.647481	0.169365	-3.823000	0.0006
C	6.635129	1.758880	-3.772359	0.0007
@TREND(2008M04)	0.031768	0.015545	2.043599	0.0496

R-squared	0.321134	Mean dependent var	0.060354
Adjusted R-squared	0.277336	S.D. dependent var	0.915484
S.E. of regression	0.778249	Akaike info criterion	2.420557
Sum squared resid	18.77583	Schwarz criterion	2.555236

Log likelihood	38.14948	F-statistic	7.332197
Durbin-Watson stat	1.931913	Prob(F-statistic)	0.002470

Null Hypothesis: D(L_STVR) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.772851	0.0000
Test critical values:	1% level	-4.273277	
	5% level	-3.557759	
	10% level	-3.212361	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(L_STVR,2)
Method: Least Squares
Date: 09/09/13 Time: 22:37
Sample (adjusted): 2008M07 2011M02
Included observations: 32 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(L_STVR(-1))	-1.819987	0.268718	-6.772851	0.0000
D(L_STVR(-1),2)	0.428777	0.168548	2.543948	0.0168

C	-0.106737	0.334281	-0.319304	0.7519
@TREND(2008M04)	0.009091	0.016160	0.562579	0.5782

R-squared	0.711961	Mean dependent var	-0.015201
Adjusted R-squared	0.681099	S.D. dependent var	1.494161
S.E. of regression	0.843772	Akaike info criterion	2.614599
Sum squared resid	19.93462	Schwarz criterion	2.797816
Log likelihood	-37.83359	F-statistic	23.06966
Durbin-Watson stat	2.152619	Prob(F-statistic)	0.000000

Null Hypothesis: L_TR has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.576562	0.0045
Test critical values:	1% level	-4.252879	
	5% level	-3.548490	
	10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L_TR)

Method: Least Squares

Date: 09/09/13 Time: 21:28

Sample (adjusted): 2008M05 2011M02

Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
L_TR(-1)	-0.794888	0.173687	-4.576562	0.0001
C	-4.725070	1.079017	-4.379051	0.0001
@TREND(2008M04)	-0.006882	0.013207	-0.521063	0.6060

R-squared	0.403349	Mean dependent var	0.038249
Adjusted R-squared	0.364855	S.D. dependent var	0.944149
S.E. of regression	0.752449	Akaike info criterion	2.353129
Sum squared resid	17.55155	Schwarz criterion	2.487808
Log likelihood	-37.00320	F-statistic	10.47831
Durbin-Watson stat	1.879078	Prob(F-statistic)	0.000334

Null Hypothesis: D(L_TR) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 3 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.259752	0.0109
Test critical values:	1% level	-4.296729	
	5% level	-3.568379	
	10% level	-3.218382	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L_TR,2)

Method: Least Squares

Date: 09/09/13 Time: 22:39

Sample (adjusted): 2008M09 2011M02

Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(L_TR(-1))	-2.532052	0.594413	-4.259752	0.0003
D(L_TR(-1),2)	1.055965	0.483667	2.183245	0.0390
D(L_TR(-2),2)	0.452758	0.328098	1.379951	0.1803
D(L_TR(-3),2)	0.233687	0.188781	1.237878	0.2277
C	-0.269141	0.401346	-0.670597	0.5089
@TREND(2008M04)	0.011495	0.018780	0.612092	0.5462
R-squared	0.726111	Mean dependent var		0.024138

Adjusted R-squared	0.669051	S.D. dependent var	1.538313
S.E. of regression	0.884964	Akaike info criterion	2.770317
Sum squared resid	18.79587	Schwarz criterion	3.050556
Log likelihood	- 35.55475	F-statistic	12.72535
Durbin-Watson stat	2.040088	Prob(F-statistic)	0.000004

Null Hypothesis: L_IDX has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.768948	0.2177
Test critical values:	1% level	-4.252879	
	5% level	-3.548490	
	10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L_IDX)

Method: Least Squares

Date: 09/09/13 Time: 22:33

Sample (adjusted): 2008M05 2011M02

Included observations: 34 after adjustments

Variable	Coefficie nt	Std. Error	t-Statistic	Prob.
L_IDX(-1)	-	0.087766	-2.768948	0.0094

C	0.243019 1.581025	0.584152	2.706530		0.0110
@TREND(2008M04)	0.006453	0.002051	3.145477		0.0036

R-squared	0.252094	Mean dependent var	0.007390
Adjusted R-squared	0.203842	S.D. dependent var	0.092002
S.E. of regression	0.082091	Akaike info criterion	-2.077876
Sum squared resid	0.208908	Schwarz criterion	-1.943197
Log likelihood	38.32389	F-statistic	5.224521
Durbin-Watson stat	1.948086	Prob(F-statistic)	0.011082

Null Hypothesis: D(L_IDX) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.439820	0.0005
Test critical values:	1% level	-4.262735	
	5% level	-3.552973	
	10% level	-3.209642	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L_IDX,2)

Method: Least Squares

Date: 09/09/13 Time: 22:34

Sample (adjusted): 2008M06 2011M02

Included observations: 33 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(L_IDX(-1))	-0.990771	0.182133	-5.439820	0.0000
C	-0.038706	0.035275	-1.097254	0.2813
@TREND(2008M04)	0.002566	0.001757	1.460702	0.1545

R-squared	0.496633	Mean dependent var	0.001072
Adjusted R-squared	0.463076	S.D. dependent var	0.126858
S.E. of regression	0.092956	Akaike info criterion	-1.826881
Sum squared resid	0.259223	Schwarz criterion	-1.690835
Log likelihood	33.14353	F-statistic	14.79935
Durbin-Watson stat	1.756502	Prob(F-statistic)	0.000034

Appendix 5.4: Cointegration test

MODEL 2

Date: 09/17/13 Time: 11:37

Sample (adjusted): 2008M08 2011M02

Included observations: 31 after adjustments

Trend assumption: No deterministic trend (restricted constant)

Series: L_GDPR L_IDX L_MCR L_TR

Lags interval (in first differences): 1 to 3

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.828323	102.0263	54.07904	0.0000
At most 1 *	0.615306	47.39992	35.19275	0.0015
At most 2	0.358530	17.78537	20.26184	0.1058
At most 3	0.121666	4.021578	9.164546	0.4089

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.828323	54.62638	28.58808	0.0000
At most 1 *	0.615306	29.61455	22.29962	0.0040
At most 2	0.358530	13.76379	15.89210	0.1049

At most 3	0.121666	4.021578	9.164546	0.4089

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

L_GDPR	L_IDX	L_MCR	L_TR	C
-230.0152	4.841294	1.755914	-8.027389	5590.831
211.5225	-5.308244	1.449493	3.647975	-5146.463
-341.9503	-43.94346	15.61487	-3.401672	8758.769
27.77089	-3.304926	1.440959	-0.744036	-662.0986

Unrestricted Adjustment Coefficients (alpha):

D(L_GDPR)	-3.15E-05	-7.44E-05	9.93E-06	-3.28E-05
D(L_IDX)	0.008008	0.025589	0.017108	0.001481
D(L_MCR)	0.015235	0.080051	-0.027858	-0.036561
D(L_TR)	0.554199	-0.070158	-0.066533	0.021784

1 Cointegrating Equation(s): Log likelihood 303.2913

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR	C
1.000000	-0.021048	-0.007634	0.034899	-24.30635
	(0.01854)	(0.00515)	(0.00255)	(0.15100)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	0.007252
	(0.00734)
D(L_IDX)	-1.841987
	(2.37054)

D(L_MCR)	-3.504269
	(8.33119)
D(L_TR)	-127.4742
	(16.0739)

2 Cointegrating Equation(s): Log likelihood 318.0986

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR	C
1.000000	0.000000	-0.082963	0.126694	-24.18041
		(0.01870)	(0.02730)	(0.19057)
0.000000	1.000000	-3.578965	4.361270	5.983701
		(0.85030)	(1.24103)	(8.66306)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	-0.008495	0.000243
	(0.00832)	(0.00019)
D(L_IDX)	3.570656	-0.097063
	(2.61141)	(0.06004)
D(L_MCR)	13.42840	-0.351175
	(9.66132)	(0.22212)
D(L_TR)	-142.3141	3.055454
	(21.2171)	(0.48780)

3 Cointegrating Equation(s): Log likelihood 324.9805

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR	C
1.000000	0.000000	0.000000	0.013701	-24.54793
			(0.00429)	(0.02618)
0.000000	1.000000	0.000000	-0.513169	-9.871090
			(0.10736)	(0.65485)

0.000000	0.000000	1.000000	-1.361969	-4.429994
			(0.36941)	(2.25329)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	-0.011891	-0.000194	-8.19E-06
	(0.01229)	(0.00118)	(0.00042)
D(L_IDX)	-2.279486	-0.848855	0.318294
	(3.39061)	(0.32592)	(0.11550)
D(L_MCR)	22.95437	0.872992	-0.292210
	(13.9951)	(1.34525)	(0.47675)
D(L_TR)	-119.5630	5.979155	-0.167475
	(30.6014)	(2.94151)	(1.04245)

MODEL 3

Date: 09/17/13 Time: 11:38

Sample (adjusted): 2008M08 2011M02

Included observations: 31 after adjustments

Trend assumption: Linear deterministic trend

Series: L_GDPR L_IDX L_MCR L_TR

Lags interval (in first differences): 1 to 3

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.822273	94.14227	47.85613	0.0000
At most 1 *	0.578535	40.58964	29.79707	0.0020
At most 2	0.358525	13.80504	15.49471	0.0884
At most 3	0.001338	0.041496	3.841466	0.8386

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.822273	53.55263	27.58434	0.0000
At most 1 *	0.578535	26.78460	21.13162	0.0072
At most 2	0.358525	13.76355	14.26460	0.0599
At most 3	0.001338	0.041496	3.841466	0.8386

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

L_GDPR	L_IDX	L_MCR	L_TR
-242.5217	5.117302	1.740484	-8.324027
199.5702	-5.288588	1.833732	2.916572
-342.3117	-43.93004	15.60702	-3.401635
-92.59304	-24.47985	4.992690	-4.157722

Unrestricted Adjustment Coefficients (alpha):

D(L_GDPR)	-2.82E-05	-8.23E-05	1.02E-05	-2.91E-06
D(L_IDX)	0.005171	0.024378	0.017074	4.99E-05
D(L_MCR)	-0.000970	0.059392	-0.027733	-0.003864
D(L_TR)	0.553119	-0.037318	-0.066658	0.002001

1 Cointegrating Equation(s): Log likelihood 306.6964

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR
1.000000	-0.021100	-0.007177	0.034323
	(0.01848)	(0.00513)	(0.00254)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	0.006835
	(0.00800)
D(L_IDX)	-1.254171
	(2.52857)
D(L_MCR)	0.235149
	(8.19368)
D(L_TR)	-134.1433
	(17.0395)

2 Cointegrating Equation(s): Log likelihood 320.0887

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR
1.000000	0.000000	-0.071129	0.111341
		(0.01606)	(0.02344)
0.000000	1.000000	-3.030844	3.650076
		(0.72677)	(1.06074)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	-0.009582	0.000291
	(0.00824)	(0.00019)
D(L_IDX)	3.610920	-0.102461
	(2.69718)	(0.06320)
D(L_MCR)	12.08806	-0.319062
	(9.59843)	(0.22490)

D(L_TR)	-141.5908	3.027834
	(21.8832)	(0.51274)

3 Cointegrating Equation(s): Log likelihood 326.9705

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR
1.000000	0.000000	0.000000	0.013556
			(0.00440)
0.000000	1.000000	0.000000	-0.516609
			(0.11019)
0.000000	0.000000	1.000000	-1.374761
			(0.37856)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	-0.013070	-0.000157	-4.09E-05
	(0.01214)	(0.00116)	(0.00041)
D(L_IDX)	-2.233741	-0.852526	0.320179
	(3.49503)	(0.33510)	(0.11895)
D(L_MCR)	21.58125	0.899232	-0.325601
	(13.8493)	(1.32786)	(0.47133)
D(L_TR)	-118.7728	5.956140	-0.146075
	(31.4850)	(3.01875)	(1.07152)

MODEL 4

Date: 09/17/13 Time: 11:39

Sample (adjusted): 2008M08 2011M02

Included observations: 31 after adjustments

Trend assumption: Linear deterministic trend (restricted)

Series: L_GDPR L_IDX L_MCR L_TR

Lags interval (in first differences): 1 to 3

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.856967	131.0251	63.87610	0.0000
At most 1 *	0.681966	70.74004	42.91525	0.0000
At most 2 *	0.534953	35.22653	25.87211	0.0026
At most 3	0.309765	11.49242	12.51798	0.0737

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.856967	60.28507	32.11832	0.0000
At most 1 *	0.681966	35.51351	25.82321	0.0019
At most 2 *	0.534953	23.73411	19.38704	0.0109
At most 3	0.309765	11.49242	12.51798	0.0737

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

L_GDPR	L_IDX	L_MCR	L_TR	@TREND(08M05)
-60.57127	16.08585	0.237145	-7.881753	-0.301117
341.1909	23.77881	-5.042000	2.012968	-0.533406
471.0878	15.79313	-2.998516	4.086949	-0.346737
-132.9727	-35.05829	14.78779	-2.686452	-0.291212

Unrestricted Adjustment Coefficients (alpha):

D(L_GDPR)	-3.88E-05	1.45E-05	-9.25E-05	-1.92E-05
D(L_IDX)	-0.002548	-0.024618	0.011048	0.015245
D(L_MCR)	-0.036131	-0.079667	0.021790	-0.048800
D(L_TR)	0.560108	-0.097761	-0.025264	-0.051523

1 Cointegrating Equation(s): Log likelihood 310.0627

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR	@TREND(08M05)
1.000000	-0.265569	-0.003915	0.130124	0.004971
	(0.06574)	(0.02256)	(0.01332)	(0.00097)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	0.002352
	(0.00196)
D(L_IDX)	0.154317
	(0.63498)
D(L_MCR)	2.188487
	(1.97644)

D(L_TR)	-33.92647
	(4.05364)

2 Cointegrating Equation(s): Log likelihood 327.8194

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR	@TREND(08M05)
1.000000	0.000000	-0.012520	0.031723	-0.000205
		(0.00383)	(0.00413)	(0.00030)
0.000000	1.000000	-0.032400	-0.370527	-0.019491
		(0.03800)	(0.04099)	(0.00298)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	0.007314	-0.000279
	(0.01113)	(0.00092)
D(L_IDX)	-8.245131	-0.626369
	(2.98588)	(0.24737)
D(L_MCR)	-24.99329	-2.475589
	(9.11151)	(0.75486)
D(L_TR)	-67.28148	6.685188
	(21.6865)	(1.79666)

3 Cointegrating Equation(s): Log likelihood 339.6865

Normalized cointegrating coefficients (standard error in parentheses)

L_GDPR	L_IDX	L_MCR	L_TR	@TREND(08M05)
1.000000	0.000000	0.000000	0.013351	6.61E-06
			(0.00562)	(0.00025)
0.000000	1.000000	0.000000	-0.418074	-0.018944
			(0.03767)	(0.00165)
0.000000	0.000000	1.000000	-1.467506	0.016899
			(0.57318)	(0.02509)

Adjustment coefficients (standard error in parentheses)

D(L_GDPR)	-0.036280	-0.001740	0.000195
	(0.01345)	(0.00075)	(0.00013)
D(L_IDX)	-3.040553	-0.451887	0.090392
	(4.78925)	(0.26833)	(0.04808)
D(L_MCR)	-14.72840	-2.131460	0.327778
	(15.0632)	(0.84396)	(0.15122)
D(L_TR)	-79.18313	6.286188	0.701491
	(36.4231)	(2.04073)	(0.36566)

Appendix 5.5: Granger Causality Test

Pairwise Granger Causality Tests

Date: 01/23/14 Time: 10:39

Sample: 2008M04 2011M02

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Probability
D_IDX does not Granger Cause D_GDPR	33	0.42650	0.51869
D_GDPR does not Granger Cause D_IDX		0.30173	0.58686
D_MCR does not Granger Cause D_GDPR	33	0.63722	0.43099
D_GDPR does not Granger Cause D_MCR		0.16796	0.68484
D_TR does not Granger Cause D_GDPR	33	0.18527	0.66996
D_GDPR does not Granger Cause D_TR		0.52391	0.47478
D_MCR does not Granger Cause D_IDX	33	42.0825	3.6E-07
D_IDX does not Granger Cause D_MCR		2.92084	0.09777
D_TR does not Granger Cause D_IDX	33	1.66092	0.20733
D_IDX does not Granger Cause D_TR		1.01646	0.32142
D_TR does not Granger Cause D_MCR	33	0.00213	0.96350
D_MCR does not Granger Cause D_TR		0.92882	0.34288

Pairwise Granger Causality Tests

Date: 01/23/14 Time: 10:42

Sample: 2008M04 2011M02

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
D_IDX does not Granger Cause D_GDPR	32	1.29125	0.29137
D_GDPR does not Granger Cause D_IDX		0.47875	0.62472
D_MCR does not Granger Cause D_GDPR	32	0.10331	0.90220
D_GDPR does not Granger Cause D_MCR		0.60802	0.55171
D_TR does not Granger Cause D_GDPR	32	0.29072	0.75003
D_GDPR does not Granger Cause D_TR		0.64081	0.53469
D_MCR does not Granger Cause D_IDX	32	15.9199	2.7E-05
D_IDX does not Granger Cause D_MCR		0.16694	0.84712
D_TR does not Granger Cause D_IDX	32	0.86317	0.43314
D_IDX does not Granger Cause D_TR		0.32138	0.72788
D_TR does not Granger Cause D_MCR	32	0.02848	0.97195
D_MCR does not Granger Cause D_TR		0.19685	0.82248

Pairwise Granger Causality Tests

Date: 01/23/14 Time: 10:44

Sample: 2008M04 2011M02

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability

D_IDX does not Granger Cause D_GDPR	31	0.22955	0.87489
D_GDPR does not Granger Cause D_IDX		1.60115	0.21526
D_MCR does not Granger Cause D_GDPR	31	0.18497	0.90557
D_GDPR does not Granger Cause D_MCR		0.44769	0.72120
D_TR does not Granger Cause D_GDPR	31	1.67257	0.19944
D_GDPR does not Granger Cause D_TR		0.48598	0.69521
D_MCR does not Granger Cause D_IDX	31	9.80950	0.00021
D_IDX does not Granger Cause D_MCR		1.76087	0.18151
D_TR does not Granger Cause D_IDX	31	0.74494	0.53585
D_IDX does not Granger Cause D_TR		2.07131	0.13067
D_TR does not Granger Cause D_MCR	31	0.06786	0.97647
D_MCR does not Granger Cause D_TR		0.18485	0.90565

Pairwise Granger Causality Tests

Date: 01/23/14 Time: 10:44

Sample: 2008M04 2011M02

Lags: 4

Null Hypothesis:	Obs	F-Statistic	Probability
D_IDX does not Granger Cause D_GDPR	30	0.19243	0.93965
D_GDPR does not Granger Cause D_IDX		1.29153	0.30522
D_MCR does not Granger Cause D_GDPR	30	0.03330	0.99770
D_GDPR does not Granger Cause D_MCR		0.32156	0.86032

D_TR does not Granger Cause D_GDPR	30	1.19782	0.34099
D_GDPR does not Granger Cause D_TR		0.46541	0.76037
D_MCR does not Granger Cause D_IDX	30	8.05041	0.00042
D_IDX does not Granger Cause D_MCR		2.12406	0.11362
D_TR does not Granger Cause D_IDX	30	0.41256	0.79760
D_IDX does not Granger Cause D_TR		1.78198	0.17019
D_TR does not Granger Cause D_MCR	30	1.95783	0.13817
D_MCR does not Granger Cause D_TR		0.70345	0.59838

Appendix 5.6 vector Error Correction Model VECM

Vector Error Correction Estimates
Date: 06/30/14 Time: 13:05
Sample (adjusted): 2008M09 2011M02
Included observations: 30 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
L_GDPR(-1)	1.000000
L_IDX(-1)	0.057384 *
	(0.01172)
	[4.89685]
L_MCR(-1)	-0.022149 *
	(0.00340)
	[-6.51021]
L_TR(-1)	0.018489 *
	(0.00406)
	[4.55131]
@TREND(08M04)	-0.001956
C	-24.96784

Error Correction:	D(L_GDPR)
CointEq1	-0.034749
	(0.02394)
	[-1.45129]

D(L_GDPR(-1))	2.734375	*
	(0.45446)	
	[6.01675]	
D(L_GDPR(-2))	-3.399016	**
	(1.11716)	
	[-3.04255]	
D(L_GDPR(-3))	2.523239	**
	(1.13637)	
	[2.22044]	
D(L_GDPR(-4))	-0.715315	
	(0.42786)	
	[-1.67185]	
D(L_IDX(-1))	0.000856	
	(0.00108)	
	[0.79509]	
D(L_IDX(-2))	0.000351	
	(0.00105)	
	[0.33471]	
D(L_IDX(-3))	-0.000295	
	(0.00140)	
	[-0.21059]	
D(L_IDX(-4))	-0.000380	
	(0.00106)	
	[-0.35726]	

D(L_MCR(-1))	-0.000253
	(0.00055)
	[-0.46269]
D(L_MCR(-2))	-0.000196
	(0.00040)
	[-0.48760]
D(L_MCR(-3))	9.35E-06
	(0.00034)
	[0.02724]
D(L_MCR(-4))	0.000252
	(0.00036)
	[0.70710]
D(L_TR(-1))	0.000567
	(0.00039)
	[1.46747]
D(L_TR(-2))	0.000436
	(0.00029)
	[1.49329]
D(L_TR(-3))	0.000290
	(0.00017)
	[1.66016]
D(L_TR(-4))	0.000168 **
	(7.4E-05)
	[2.27456]
C	0.001032 ***

	(0.00051)	
	[2.03401]	
@TREND(08M04)	-8.16E-05	***
	(4.1E-05)	
	[-1.96962]	

R-squared	0.999910
Adj. R-squared	0.999763
Sum sq. resids	2.63E-07
S.E. equation	0.000155
F-statistic	6802.566
Log likelihood	235.7379
Akaike AIC	-14.44919
Schwarz SC	-13.56177
Mean dependent	-0.001188
S.D. dependent	0.010041

Determinant resid covariance (dof adj.)	7.33E-14
Determinant resid covariance	1.32E-15
Log likelihood	343.5881
Akaike information criterion	-17.57254
Schwarz criterion	-13.83601