



Shahid Chamran
University of Ahvaz

Quarterly Journal of Quantitative Economics

Journal Homepage:
www.jqe.scu.ac.ir
Print ISSN: 2008-5850
Online ISSN: 2717-4271



The Role of Business Cycles in the Impact of Government Social and Cultural Expenditures on Social Welfare (NARDL Approach)

Narges Ahmadvand*^{ORCID}, Mohammad Alizadeh, ** Mohammad Hassan Fotros,*** Mahbube Delfan****

* PhD Candidate in the field of public sector, Lorestan University, Lorestan, Iran .

Email: Narges.ahmadvand.4630@gmail.com

**Economy Associate Professor, Lorestan University, Lorestan, Iran. (Corresponding Author)

Email: Alizadeh_176@yahoo.com

^{ORCID} [0000-0003-0026-9619](https://orcid.org/0000-0003-0026-9619)

Postal address: Khoram Abad, Lorestan, Postal code: 68151- 44316.

*** Professor, Department of Economics, Faculty of Economics and Social Sciences, Bu- Ali Sina University, Hamedan, Iran.

Email: Fotros.fotros@basu.ac.ir

**** Economy Assistant Professor, Lorestan University, Lorestan, Iran.

Email: Delfan.m@lu.ac.ir

| ARTICLE HISTORY | JEL CLASSIFICATION | KEYWORDS |
|--|---------------------------|---|
| <i>Received: 24 October 2021</i> <i>Revision: 18 February 2022</i> <i>Acceptance: 18 February 2022</i> | <i>J16, J21, E24, O55</i> | <i>Social and Cultural Affairs, Business Cycles, Amartyasen Social Welfare Index, NARDL</i> |

Acknowledgments: The authors would like to acknowledge the valuable comments and suggestions of the reviewers, which have improved the quality of this paper.

Conflict of Interest: The authors declare no conflict of interest.

Funding: The authors received no financial support for the research, authorship, and publication of this article.

How to Cite:

Ahmadvand, Narges, Alizadeh, Mohammad, Fotros, Mohammad Hassan & Delfan, Mahbube (2025). The Role of Business Cycles in the Impact of Government Social and Cultural Expenditures on Social Welfare (NARDL Approach). *Quarterly Journal of Quantitative Economics (JQE)*, 21(4), 122-162. [in persian]

 [10.22055/jqe.2022.38986.2429](https://doi.org/10.22055/jqe.2022.38986.2429)



© 2025 Shahid Chamran University of Ahvaz, Ahvaz, Iran. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0 license) (<http://creativecommons.org/licenses/by-nc/4.0/>)

EXTENDED ABSTRACT

INTRODUCTION

As a multidimensional concept, social welfare includes not only economic issues such as per capita income, but also other issues such as health, housing, education, employment, environment include for assessing individual well-being in a society (Noll, 2002). Ambia & Sujarwoto (2018) stated that government policies in the proper allocation of resources are a determining factor in increasing social welfare (Ambia & Sujarwoto, 2018). Thus, the evolution of government policies shows the importance of prioritizing government expenditure in increasing welfare. Along with the process of allocating government budgets in various sectors of the economy, governments have always keep the ratio of expenditures to GDP constant. So that they increase their expenditures slowly during the boom periods and refrain from rapidly declining expenditures during the recession (Ghasemi & Mohajeri, 2015). In other words, governments have to reduce economic fluctuations and make society stability to achieve goals such as increasing social welfare. Therefore, it is important to consider the role of business cycles in the correct implementation of government policies in increasing social welfare.

METHODOLOGY

$$(1) \quad \begin{aligned} \log(W) = & \alpha + \beta_0 WL + \beta_1 \log(\text{Other_EXP}) + \beta_2 \log(\text{In}_t) + \\ & \beta_3 \log(\text{Urban}_t) + \beta_4 \log(\text{Open}_t) + \beta_5 \log(\text{Literacy}_t) + \\ & \beta_6 \text{Subsidy}_t + \beta_7 (\text{Shock}_{POS} * \text{RECESION})_t + \beta_8 (\text{Shock}_{POS} * \\ & \text{BOOM})_t + \beta_9 (\text{Shock}_{NEG} * \text{RECESION})_t + \beta_{10} (\text{Shock}_{NEG} * \text{BOOM})_t + \\ & u_t \end{aligned}$$

It should be noted that all variables were considered logarithmically in the estimation model.

In order to estimate the models during the period 1973-2019, research data have been collected from the Central Bank of the Islamic Republic of Iran, the Ministry of Economic Sciences and Finance, the Statistics Center of Iran and the World Bank.

CONCLUSION and POLICY REMARKS

The results show that the positive shocks of government expenditures on social and cultural affairs, the chapters of education, physical education, culture and art, social welfare and health have caused increasing social welfare significantly. The negative shocks of government expenditures on chapters of culture and art and education during periods of recession and social welfare chapter during periods of boom have caused increasing social welfare significantly. Also, in the negative shocks of government expenditures on social and cultural affairs during business cycles and the health chapter during boom periods have reduced social welfare, significantly. Considering the positive shock of government expenditures, social and cultural affairs, the chapters of education, physical education, culture and art, social welfare and health have a greater impact on social welfare during the boom period. while the results of negative shock of government expenditures, social and cultural affairs and the education chapters have a greater impact in the recession period and the chapters of physical education, culture and art, social welfare and health have a greater impact on social welfare in boom periods.

Government Expenditure on social and cultural affairs and related sub-chapters during business cycles has had asymmetric effects on social welfare. Therefore, with a positive shock of government expenditures, government social and cultural s expenditures should be spent on the social welfare, culture and arts, physical education, health and education chapters during periods of recession and boom. Also, with negative shocks,

government expenditures during periods of recession should be spent on the culture and arts and education chapters, and during boom periods on social welfare, culture, and arts chapters.

References

- Addison, T., Niño-Zarazúa, M., & Tarp, F. (2015). Aid, Social Policy, and Development. *WIDER Working Paper*, No.061.
- Agenor, P. R. (2002). *Does Globalization Hurt the Poor?* The World Bank. Washington DC.
- Ahmadvand, N., Alizadeh, M., Fotros, M. H., & Delfan, M. (2020). Achieving the optimal share of government expenditures in GDP with the aim of maximizing social welfare (with emphasis on the affairs and seasons of the state budget). *Journal of social welfare*. 20(79), 153-195. [in Persian]
- Ambia, A. N., & Sujarwoto, N. I. (2018). Infrastructure Expenditure and Poverty Reduction in Indonesia. *Rjoas*, 34(76), 40-51.
- Asghar, N., Hussain, Z., & Rehman, H. U. (2012). The Impact of Government Spending on Poverty Reduction: Evidence from Pakistan 1972 to 2008. *African Journal of Business Management*, 6(3), 845-853.
- Ashrafi, Y., Salimifar, M., Adeli, M., & Tavaklian, H. (2018). Investigating the Effect of Government Expenditure on Welfare in Iran: Application of Stochastic Dynamic General Equilibrium Patterns. *Journal of Economic Research and Policy*, 85(26), 33-82. [in Persian]
- Bulir, A. (2001). Income Inequality: Does Inflation Matter? *IMF Working Paper*, 48(1).
- Claus, I., Martinez-Vazquez, J., & Vulovic, V. (2012). *Government Fiscal Policies and Redistribution in Asian Countries*. Asian Development Bank.
- Doepke, M., & Zilibotti, F. (2013). Culture, Entrepreneurship, and Growth. *NBER Working Paper*, No.654.
- Enisan Akinlo, A., Olayemi Jemiluyi. O. (2018). Government Expenditure and Economic Growth Nexus in Nigeria: Evidence from Nonlinear ARDL and Causality Approaches. *Evievs of Innovation and Competitiveness*, 4 (2), 5-25.
- Furceri, D., & Zdzienicka, A. (2010). The Effects of Social Spending On Economic Activity: Empirical Evidence from A Panel of OECD

- Countries. *OECD Economics Department Working Papers*, No.770, 771-730.
- Ghaffari, G., & Omid, R. (2011). *Quality of Life: Social Development Index*. Tehran: Shirazeh Publishing. [in Persian]
- Ghasemi, M., & Mohajeri, P. (2015). Investigating the cyclical behavior of fiscal policy in Iran. *Journal of Economic Research*, 15(56), 75-104. [in Persian]
- Gholami, E., & Hozhabr Kiani, K. (2014). Evaluating of the Business Cycle Status in Iran and its Impact on the Effectiveness of Fiscal Stimulus Programs and Investment. *Journal of Investment Knowledge*, 3(12), 271-253. [in Persian]
- Granado, D., Arze, G. J., & Hajdenberg, A. (2013). *Is Social Spending Pro Cyclical? Evidence for Developing Countries*. World Development.
- Hafner, M., Yerushalmi, E., Phillips, W. D., Pollard, J., Deshpande, A., Whitmore, M., VanStolk, C. (2019). *The economic benefits of a more physically active population: An international analysis*. RAND Corporation. Santa Monica.
- Haghverdi, F. (2009). Radio and its impact on the economy of society. *The specialized scientific monthly of the Voice of the Islamic Republic of Iran*, 10(59), 98-92. [in Persian]
- Haile, F., & Nino-Zarazua, M. (2018). Dose Social Spending Improve Welfare in Low-Income and Middle Income Countries? *Journal of International Development*, 30, 367-398.
- Hosseini, S. M., Abdi, A., Gheibi, A., & Fadaei, I. (2008). ombination of budgets and budgets and general government budget chapters. *Journal of Economic Research and Policy*, 16(48), 37-63. [in Persian]
- Hulme, D., Hanlon, J., & Barrientos, A. (2012). *Just Give Money To The Poor: The Development Revolution From The Global South*. Kumarian Press.
- Ilker, U. M. (2018). The Effect of Government Social Spending on Income Inequality in OECD: A Panel Data Analysis. *International Journal of Economics Politics Humanities and Social Sciences*, 1(3), 185-202.
- Ionu, J. (2018). The Impact of Government Health and Education Expenditure on Income Inequality in EU. *Theoretical and Applied Economics, Special Issue*, 122-133.
- izadi, M. , Shakeri Hosein Abad, A. , A. Milani, M. and Mohammadi,, T. (2023). The Formation of Bubble Price in the Stock Market and Its effect on the Iran Business Cycles. *Quarterly Journal of Quantitative*

- Economics (JQE)*, 20(2), 72-99. doi: 10.22055/jqe.2021.37190.2371 [in Persian]
- Janson, P., Mango, N., Krishna, A., Rademy, M., & Johnson, N. (2009). Understanding Poverty Dynamics in Kenya. *Journal of International Development*.
- Joharji, G., & Starr, M. (2011). Fiscal Policy and Growth in Saudi Arabia. *Review of Middle East Economics and Finance*, 6(3), 24-45.
- Khanzadi, A., Fattahi, S., & Moradi, S. (2015). Investigating the effects of government health expenditures on human development in Iran. *Journal of Economics and Modeling*, 7(25), 130-149. [in Persian]
- Khodavisi, H., & EzzatiShorgoli, A. (2017). Estimation of Fiscal Policy Growth in Iranian Economy: Application of Structural Vector Autoregression and Markov Switching Models. *Journal of Economic Research (Sustainable Growth and Development)*, 19(4), 77-109. [in Persian]
- Knight, J., & Sabot, R.H. (1983). Educational Expansion and the Kuznets Effect. *American Economic Review*, 73(5), 1132-1136.
- Lindert, K. (2002). *Survey of Social Assistance in OECD Countries*. World Bank.
- Lucas, R. E. (1988). On the Mechanic of Economic Development. *Journal of Monetary Economics*, 22(1), 3-42.
- Makyian ,S.N., Samadi,A.H., & Amareh,J. (2022). Investigating the Cyclical Status of Monetary, Financial Policies in Iran. *Quarterly Journal of Quantitative Economics (JQE)*,18(4), 67-92. [in Persian]
- MCCulloch, N., Winter, L., & Cirera, X. (2003). *Trade Liberalisation and Poverty: A Handbook*. Centre for Economic Policy Research.
- Minhaj, S., & Nishat, M. (2018). *Impact of Government's Spending on the Welfare in Pakistan Economy*. Institute of Business Administration. Karachi.
- Motameni,M., Jafari Samimi,A., & Zaroki, Sh. (2020). Testing Okun's Law in Iran: New Evidence with Nonlinear ARDL Approach. *Journal of Macro Economic* 14 (27), 122-147. [in Persian]
- Noll, H. H. (2002). *Social Indicators And Quality Of Life Research: Background, Achievements And Current Trends*. Advances In Sociological Knowledge Over Half A Century. International Social Science Council. Paris.
- Odior, E. S. (2014). Government Over met Averment Expenditure on Education and Poverty Reduction: Implications for Achieving the

- MDGS in Nigeria a Computable General Equilibrium Micro-Simulation Analyses. *Asian Economic and Financial Review*, 4(2), 150-172.
- O'Donnell, O., vanDoorslaer, E., & vanOurti, T. (2013). Health and Inequality. *Discussion Paper*, No.432.
- Omodero, C. O. (2019). Government Sectoral Expenditure and Poverty Alleviation in Nigeria. *Research in World Economy*, 10(1), 80-90.
- Oriavwote, E., & Ukawe, A. (2018). Government Expenditure and Poverty Reduction in Nigeria. *Journal of Economics and Public Finance*, 34(2), 156-163.
- Pena, J. B. (1977). Problemas de la medición del bienestar y conceptos afines (Una aplicación al caso español). *INE*, No.345.
- Rafie, M., Bahrami, J., & Daneshjafari, D. (2014). Evaluation of Fiscal Policy for Iran's Economy in a Stochastic Dynamic General Equilibrium Model Based on Real Business Cycles. *Quarterly Journal of Economic Research*, 14(54), 33-65. [in Persian]
- RashidiKhorsand, A. H. (2010). *Analysis of the composition of government expenditure components and its impact on economic growth; With emphasis on the affairs and chapters of the general government budget (1976-2003)*. (Master Thesis). University of Tehran. [in Persian]
- Rezaeipour, M., & AghaeiAkhondabi, M. (2011). Where government spending is on the actual consumption of the private sector. *Journal of Economic Research and Policy*, 19(60), 139-160. [in Persian]
- Saedi Sarkhanlou, A., & Dargahi, H. (2021). Determinants of Government Budget Deficit in the Economy of Iran Emphasizing the Economic and Political Economic Factors. *The Journal of Planning and Budgeting*, 26(1), 5-32. [in Persian]
- Salehnia, N., Dehnavi, J., & Haghnejad, A. (2010). Role of Culture in Economy Development. *Engineering Cultural Monthly*, 4(43&44), 79-66. [in Persian]
- Salimifar, M., Davoodi, A., & Arabi, A. (2015). Investigating the Impact of Government Budget Composition on Welfare Indicators in Iran. *Economic Strategy Quarterly*, 3(12), 180-153. [in Persian]
- Samadi, A. H., & OjiMehar, S. (2012). Investigating the Factors Affecting the Consistent Behavior of Fiscal Policy with Emphasis on Oil Price Fluctuation: A Case Study of Iran (1987-2003). *Iranian Journal of Economic Research*, 9(18), 29-57. [in Persian]

- Scheil-Adlung, X., Asfaw, A., Booyesen, F., Lamiraud, K., Juetting, J., Xu, K., & Muchiri, S. (2006). *What Is The Impact Of Social Health Protection On Access To Health Care, Health Expenditure And Impoverishment: A Comparative Analysis Of Three African Countries*. WHO. Geneva.
- Schorderet, Y. (2003). *Asymmetric Co Integration: Revisiting Okun's Law: An Hysteretic Perspective*. University of California San Diego, Mimeo.
- ShamsAldini, A., & Gorjian, P. (2010). Factors affecting the migration of villagers to cities, with emphasis on the migration network (Case: Rostam Do village). *Human Settlement Planning Studies (Geographical Landscape)*, 5(11), 87-105. [in Persian]
- Shin, Y., Yu, B., & Greenwood-Nimmo, M. (2014). *Modelling Asymmetric Co Integration and Dynamic Multipliers in a Nonlinear ARDL Framework*. Springer. New York.
- Sourya, K., Sainasinh, S., & Onphanhdla, P. (2018). Public Spending, Aid Effectiveness and Poverty Reduction in Lao PDR. *Journal of International Cooperation Studies*, 21(2&3), 163-186.
- Tinbergen, J. (1991). On the measurement of welfare. *Journal of Econometrics*, 50(3), 7-15.
- WorldBank. (1990). *Poverty In The Midst Of Plenty, The Challenge Of Growth With Inclusion*. A World Bank Poverty Assessment. Washing, D.C. Nigeria.
- YolcuKaradam, D., Yildirim, J., & Öcal, N. (2016). Military expenditure and economic growth in Middle Eastern countries and Turkey: a non-linear panel data approach. *Defense and Peace Economics*, 1(1), 345-356.
- Zaer, A., & Gholami, E. (2008). Investigating the effects of fiscal policies on macroeconomic variables in Iran using the VAR model. *Journal of Taxation and Development*, 5(1). [in Persian]
- Zarei, Z., Ebrahimi., I, & Hematy, M.(2019). The Effects of Government Current and Development Expenditures on Private Sector Consumption Expenditures in Business Cycles Quarterly, *Journal of Quantitative Economics (JQE)*, 16 (3), 1-31. [in Persian]
- Zarzosa-Espina, P., & Somarriba-Arechavala, N. (2012). An Assessment of Social Welfare in Spain: Territorial Analysis Using a Synthetic Welfare Indicator. *Social Indicators Research* .