

Quarterly Journal of Quantitative Economics

Journal Homepage: www.jqe.scu.ac.ir

Print ISSN: 2008-5850 Online ISSN: 2717-4271



Analyzing Consumption Behavior of the Iranian Urban Households and Estimating Price and Income Elasticities during 1997-2017

Mehrnoosh Kalani Mahabadi*, Majid Sameti**, Hossein Sharifi Renani***

* ph.D. student of economics, Department of Economics, Islamic Azad University, Isfahan (Khorasgan) branch, Isfahan, Iran.

Email: kalanimehrnoosh@gmail.com

** Professor of Economics, Department of Economics, Faculty of Administrative Sciences and Economics, Isfahan University, Isfahan, Iran (corresponding author)

Email: majidsameti@ase.ui.ac.ir

0000-0002-6560-1507

Postal address: Isfahan, Azadi square, University of Isfahan Postal Code: 817467344 Department of Economics.

*** Associate Professor of Economics, Department of Economics, Islamic Azad University, Isfahan Branch (Khorasgan), Isfahan, Iran.

Email: sharifi55r@yahoo.com

ARTICLE HISTORY	JEL CLASSIFICATION	KEYWORDS
Received: 4 May 2019 Revision: 16 July 2019 Acceptance: 16 October 2019	R20, D12, C01	Linear expenditure system, Urban households, Price elasticities, Income elasticities, Seemingly unrelated regression

FURTHER INFORMATION:

The present article is taken from the doctoral dissertation of Mehrnoosh Kalani with Supervisor of Majid Sameti at the Islamic University of Isfahan. (Khorasgan).



ACKNOWLEDGMENTS: We would like to thank the referees for their thoughtful comments and suggestions.

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:

Kalani Mahabadi, Mehrnoosh., Sameti, Majid & Sharifi Renani, Hossein. (2022). Analysing Consumption Behavior of the Iranian Urban Households and Estimating Price and Incomr Elasticities during 1997-2017. *Quarterly Journal of Quantitative Economics(JQE)*, 19(3), 1-32.



© 2022 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

Examining houshold consumption expenditures and evaluating their behavior in any economy has special importance which in addition to revealing the result of the implementation of past policies, can be a roadmap for government policies at the microeconomic level. Due to the diversification of households' consumption and importance of how allocating the limited income of household to different goods and services, so, investigating the consumer behavior of households by estimating marginal propensity to oversubsistence consumption for differentgoods and services and estimating income and price elasticities, have special position in economic policies. Therefore it is necessary to know the analysis of demand function and its elasticities. In this regard, the purpose of this paper is to invesigate the consumption behavior of urban households and examining the status of different groups of goods, includind substitutes and complements to each other.

METHODOLOGY

This research has been paid to estimate demand curve parameters and calculating income and price elasticities of the Iranian consumption demand



Ouarterly Journal of Quantitative Economics(JOE) (2022) 19(3)

in eight commodity groups by applying Linear Expenditure System (LES) and using econometrics method Seemingly Unrelated Regression (SUR) during the years 1376 to 1396. In this system equations(SUR), first each equation is estimated by OLS method and after obtaining residuals, is made an estimate of variance-covariance matrix. Then the coefficients of the equation are estimated by GLS method.

FINDINGS

Any increase in the income of urban households (after deducting the minimum wage expenses) first leads to a higher demand for housing, fuel and lighting, and then is allocated to other groups. In this way after the housing and energy product groups, in order, the product groups of foods, transportation, other goods, health care, clothing, home appliances, recreation and cultural affaires have the highest priority for allocating the expenditures above the minimum wage among urban households. Also the lowest share belongs to the group of recreation, cultural affairs and education with the marginal cost share of 44%.

CONCLUSION

The results show that in the Iranian economy during the years 1376 to 1396, on average, building group and types of energy(water, electricity, gas, etc) with a coefficient of about %34 has the highest marginal propensity to consume of minimum wage. After building group, commodity groups of food and transportation with a coefficient of %19 and %15 respectively, are allocated in the next priorities of propensity of households to allocate an additional unit of their income to different groups of goods and services. So over the last 20 years, these three commidity groups, contains about %70 of the propensity of Iranian urban households to allocate surplus income. Because Iran is known as a developing country, therefore this result is in accordance with the realities of Iran s economy. Of course, with proper and purposeful planning, it should be possible in the future, by resolving or modifying these concerns, these results shifted in favor of other commodity and service groups that are important for development and progress (including education and health).

The results indicate that own-price elasticities are negative which representing the governance of demand law on consumer goods' demand. In other words, according to microeconomic theory by increasing the price of good or service, assuming other conditions are constant, the amount of demand for the good or service decreases. The results of cross-price elasticities show that there is complementary relationship between



commodity groups which indicates that in the consumption basket of urban households in Iran in 1396, there is not much variety of goods and services so that goods or services can be substituted by changing prices. Also, according to the results, food and drink, and building and different energies groups are considered as essential goods for urban households. Healthcare commodity group is a normal goods and other commodity groups are luxury goods.

Reference

- Abrishami, H., & Mehrara, M. (1997). The consumer demand model and analysis on the changes in household consumption basket during the period of 1965-1993. Iranian journal of trade studies. 3. 135-164.
- Avalabale at: https://www.sid.ir/paper/794269/fa. (in Persian)
- Akbari, A., Ahmadi Javid, M., Ziyaee, M. & Barakati, S. (2017). Estimating Food Demand in Sistan and Baluchestan Using Two Systems of NNDS and QUAIDS. *Agricultural Economics Research*, 9(34), 93-116. Avalabale at: http://jae.miau.ac.ir/article_2381.html. (in Persian)
- Baltagi, B. H. (2005). *Econometric Analysis of Panel Data*, Publisher, Wiley, P.314.
- Barten, A. P. (1969). Maximum likelihood estimation of a complete system of demand equations. *European economic review*, *1*(1), 7-73.
- Blackorby, C., Boyce, R., & Russell, R. R. (1978). Estimation of demand systems generated by the Gorman polar form; A generalization of the S-branch utility tree. Econometrica: Journal of the Econometric Society, 345-363.
- Blundell, R., & Ray, R. (1984). Testing for linear Engel curves and additively separable preferences using a new flexible demand system. The Economic Journal, 94(376), 800-811.
- Bollino, C. A., Perali, F., & Rossi, N. (2000). Linear household technologies. Journal of Applied Econometrics, 15(3), 275-287. https://doi.org/10.1002/1099-1255(200005/06)15:3<275::AID JAE560>3.0.CO;2-Q.
- Brown, M., & Heien, D. (1972). The S-branch utility tree: A generalization of the linear expenditure system. Econometrica (pre-1986), 40(4), 737.
- Chalfant, J. A. (1987). A globally flexible, almost ideal demand system. Journal of Business & Economic Statistics, 5(2), 233-242.
- Christensen, L. R., Jorgenson, D. W., & Lau, L. J. (1975). Transcendental logarithmic utility functions. The American Economic Review, 65(3), 367-383. URL: http://www.jstor.org/stable/1804840.



Quarterly Journal of Quantitative Economics(JQE) (2022) 19(3)

- Creedy, J., & Sleeman, C. (2006). Carbon taxation, prices and welfare in New Zealand. Ecological Economics, 57(3), 333-345. https://doi.org/10.1016/j.ecolecon.2005.04.015.
- Deaton, A. & Muellboure, J. (1980). "An Almost Ideal Demand System". American Economics Review 70(3): 312-326.
- Deaton, A. S. (1974). The analysis of consumer demand in the United Kingdom, 1900-1970. Econometrica: Journal of the Econometric Society, 341-367.
- Gudarzi Farahani, Y., & Abdoli, G. (2012). Estimating the Minimum Living with Linear Expenditure System in Iran and Determination of the Ratio of Households in Poverty. Journal of social welfare. 12 (45).143-172.

http://refahj.uswr.ac.ir/article-1-1008-fa.html. (in Persian)

Hooshmand, Z., Khodadad Kashi, F., & Khoshnevis, M. (2017). Evaluating the Consumption Behavior of Urban Families in Tehran Province. Journal of economic policy. 9(18). 184-203.

doi: 10.29252/jep.9.18.183. (in Persian)

Howe, H. (1975). Development of the extended linear expenditure system from simple saving assumptions. European Economic Review, 6(3), 305-310. https://doi.org/10.1016/0014-2921(75)90014-8.

https://www.amar.org.ir/

https://www.cbi.ir/

Khosravinejad, A., (1991). Estimation of demand linear expenditure system for urban households in Iran. MA thesis in economics. Faculty of political and economic sciences, Shahid behesti university. Tehran.

Avalabale at: http://sid.ir. (in Persian)

Khosravinejad, A., (2016). Analysis of consumption behavior of rural households. Planning and budgeting organization, Macroeconomic affairs. Report number 9-21. 33.

Avalabale at: http://mporg.ir/reports. (in Persian)

- Klein, L. R., & Rubin, H. (1947). A constant-utility index of the cost of living. The Review of Economic Studies, 15(2), 84-87.
- Leser, C. E. (1941). Family budget data and price-elasticities of demand. The Review of Economic Studies, 9(1), 40-57.
- Lluch, C. (1974). Expenditure, savings and habit formation. International Economic Review, 786-797.
- Makian, N., & Saadatkhah, A. (2012). The Nonlinear Relationship between Energy Consumption and Economic Growth in Iran Based on Threshold Approach. Journal of economic growth and development research. 2(5). 45-68.



https://egdr.journals.pnu.ac.ir/article_81. (in Persian)

- Mohammadzade, P., Behboodi, D., & Hekmati Farid, S. (2015). Comparing of Demand Systems in explaining of Iranian Urban Households consumption behaviour. Journal of economic research. 50(1). 193-216. https://jte.ut.ac.ir/article_54102. (in Persian)
- Motafaker Azad, M., Aghajani, F., & Amjadi, K. (2007). Studying the Demand Schedule and Consumption Behavior of the Urban Households of the Country. Journal of productivity management. 1(2). 199-226. https://jpm.tabriz.iau.ir/article_517952 (in Persian)
- MUSGROVE, P. (1977). An extended linear permanent expenditure system (ELPES). In Natural Resources, Uncertainty, and General Equilibrium Systems (pp. 241-255). Academic Press.
- Nygard, V. M. (2013). An Almost Ideal Demand System Analysis of non-Durable Consumption Categories, Revised Version Thesis for the Degree Master of Economic Theory and Econometrics Department of Economics University of Oslo.
- Pajooyan, J., & Ahmadi, M. (2012). Estimating the almost ideal demand system model for rural households in Iran. Journal of financial economics. 8(26), 13-32. Avalabale at: http://ecj.iauctb.ac.ir/m/article 512782.html (in Persian)
- Panahi, A., (1997). Analysis of consumption behavior in urban areas: The application of almost ideal demand system in the case in Iran. Journal of planning and budgeting. 5(28-29), 57-82. Avalabale at: http://jpbud.ir/article-1-808-fa.html (in Persian)
- Pollak, R. A., & Wales, T. J. (1969). Estimation of the linear expenditure system. Econometrica: Journal of the Econometric Society, 611-628.
- Prokeinováa, R. B., & Hanováa, M. (2016). Consumer's behavior of the foodstuff consumption in Slovokia. Procedia—Social and Behavioral Sciences, 220, 21-29.
- Arabpour, R., Jalaee, A., & Nejati, M. (2022). Investigating the effect of productivity shock on structural changes and water transfer potential between Iran and neighboring countries. *Quarterly Journal of Quantitative Economics(JQE)*, 19(4), doi: 10.22055/jqe.2021.34201.2260
- Sameti, M., & Izadi, S. (2014). Welfare Costs of Inflation on Different Income Deciles of Isfahan Urban Households. *Iranian journal of economic research*. 19(59). 117-152. https://ijer.atu.ac.ir/article_1414.html. (in Persian)



Ouarterly Journal of Quantitative Economics (JOE) (2022) 19(3)

- Shahabadi, A., Sadeghi Motamedd,, Z., & Chayani, T. (2022). The Effect of Types of Capital on Brain Drain in the Selected Petroleum Exporting Countries. *Quarterly Journal of Quantitative Economics(JQE)*, 19(3), -. doi: 10.22055/jqe.2021.32924.2233 (in persian)
- Sheng, Y. Nasir, SH. Zainalabidin, M. Mahir, A. and Alias, R. (2008). "Demand Analyses of Rice in Malaysia". Universiti Putra Malaysia, MPRA Paper 15062.
- Soori, A., (2012). Application of eviews 7 In econometrics. Tehran. Farhng publication. Avalabale at: http://sid.ir. (in Persian)
- Stone, R. (1954). Linear expenditure systems and demand analysis: an application to the pattern of British demand. The Economic Journal, 64(255), 511-527.
- Tian, G., & Chipman, J. S. (1989). A class of dynamic demand systems. In Advances in econometrics and modelling (pp. 93-116). Springer, Dordrecht. https://doi.org/10.1007/978-94-015-7819-6_7.
- Torkamani, J., & Dehghanpoor, H. (2009). Investigating the consumption behavior of urban and rural households in Iran. Journal of water and soil sciences. 13(48), 391-402.
- Avalabale at: http://jstnar.iut.ac.ir/article-1-1029-fa.html. (in Persian)
- Wales, T. J. (1971). A generalized linear expenditure model of the demand for non-durable goods in Canada. The Canadian Journal of Economics/Revue canadienne d'Economique, 4(4), 471-484.
- Wan, G. H. (1998). Linear estimation of the nonlinear almost ideal demand system: A Monte Carlo study. Applied Economics Letters, 5(3), 181-186.
- Woodland, A. D. (1979). Stochastic specification and the estimation of share equations. Journal of Econometrics, 10(3), 361-383. https://doi.org/10.1016/0304-4076(79)90089-7.
- Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. Journal of the American Statistical Association, 57(298), 348-368.