

**The group examined the relationship between air pollution, GDP,  
energy intensity and openness in Iran  
(Applications of Environmental Kuznets hypothesis)**

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**Abstract**

Environmental degradation is one of the most controversial issues in the economic environment has become. With the increase in greenhouse gases such as carbon dioxide, the risk of global warming, rising sea levels, as well as major changes in natural ecosystems is encountered. In the present study the long-term and short-term variations in carbon dioxide intensity of energy, economic growth and openness, in terms of the environmental Kuznets hypothesis using a distributed lag model autoregressive (ARDL) during the years 1965-2011 for Iran has been investigated. The results showed that both long-term and short-term relationship with third (N-shapes) Kuznets hypothesis is confirmed. In addition, the openness variable is not significant in the long run but in the short-term direct effect on carbon dioxide emissions. Also, long-term energy intensity variable is positive and significant effect on carbon dioxide emissions and the coefficient of this variable (0.86) obtained which indicates that for every one percent increase in energy intensity is less than one percent of the size 0.86% resulted in an increase in carbon dioxide emissions. This must be done in order to improve energy efficiency and reduce carbon dioxide emissions.

**JEL:** Q5, Q53, Q56

**Keywords:** carbon dioxide emissions, energy intensity, economic growth, environmental Kuznets hypothesis, auto Regressive Distributed Lag.

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## **Determination of Effective Factors Share on Groundwater Overdraft (Case Study: Marvdasht District)**

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### **Abstract**

Water deficit is one of the main factors limiting the development of economic activities. One of the main problems in the field of water resources is the poor management and excessive use of these resources. Unauthorized withdrawals of groundwater resources and disproportionate cultivation of crops with environmental conditions have been lead to inefficient allocation and waste of water resources without considering the high cost of dams' construction and pumping systems. In the current study, Logit model was used for the determination of effective factors on groundwater resources overdraft. So, 290 questionnaires from 12 villages of Marvdasht district that used well for agricultural activities were filled. Study results showed that income level and water canal type has positive effect and exploitation license of groundwater resources, sub-vector efficiency, water return, participation in educational classes, farm distance to water resource and education level, respectively has negative and significant effect on groundwater overdraft. Implementation of support policies such as making appropriate facilities for canals equipment and irrigation systems suitable to topographic conditions in order to farm efficiency improvement and impose fines for unauthorized wells as a way to reduce overdraft in the region is suggested.

**JEL classification:** Q12, Q25, C81

**Key words:** overdraft, groundwater resources, Marvdasht

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## Investigating Budget Constraints in Wheat Production in East Azerbaijan Province: Applying a Generalized Functional Form of Indirect Production Function

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### Abstract

Developing and specifying appropriate and practical models for consumption and production economic is one of the most important tasks of applied economics. The present study examines the budget constraints of wheat production in East-Azerbaijan Province by using the "Lewbel" functional form for indirect production function approach. This functional form is generalized functional form of two "Translog" and "Almost Ideal Supply System" (AISS) functional form. The data of this research was collected with reference to "Iranian Agricultural Organization" and "agriculture statistical yearbook" for the period 1991-2012. Findings show that using all three functional forms, i.e. Translog, Almost Ideal Supply System (AISS) and Lewbel, Lagrange multipliers are greater than one, which indicates the budget constraints or accessible financial resource constraints for farmers. Budget constraint has caused an output 45.30 percent lower than the desired level. Rate of technical change is almost equal to zero; implying that on average, technology did not change during the period of studying. All of direct inputs-demand elasticities for irrigated wheat crop are negative and smaller than one, it shows negative relationship between inputs price and quantity. According to economic theory, cost elasticities are positive so that, there is direct relationship between inputs quantity and cost. The consistency of above findings with economical theories confirms the effectiveness of the Lewbel model.

*JEL Classification: Q12, Q14*

*Keywords:* budget constraints, indirect production function, generalized Lewbel functional form, irrigated wheat, East Azerbaijan.

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## Assessing the Impacts of Dried Fruit Price Surging on Nutritional Welfare of Consumers in Iran

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### Abstract

Dried fruit price increases caused significant numbers of households to fall into nutritional poverty particularly in the developing world. The dried fruit prices increased disproportionately in Iran during the one-year period. While increasing dried fruit prices resulted in decreasing some dried fruit purchases, it influenced the food security of many people. The objective of this article is to provide an assessment of decreasing nutritional well-being due to dried fruit price surging in rural and urban regions in Iran. In this study, each sample of rural and urban households divided to two various expenditure groups including high income and low income groups. Utilizing samples of 6014 rural households and 6860 urban households selected from national expenditure survey data of 2011 and 2012, censored quadratic approximations of the almost ideal demand system are estimated and nutritional well-being effects are discussed separately for each household group in these areas. The findings of this study indicate that respectively almost 62 percent and 56 percent of rural and urban households entering nutritional poverty due to recent dried fruit price surging.

**JEL Classification:** D19, I38, Q11

**Keywords:** Dried fruit price surging, Two-stage QUAIDS model, Nutritional well-being, Iran

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## Prediction of Meat Demand in IRAN for Urban Areas Using Genetic Algorithm

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### Abstract

In this study, the demand for different types of meat including red meat, Poultry and fish have been analyzed from 1368 to 1390 in urban areas of Iran. In order to select the most Suitable model for demand, the SUR method out of Rotterdam, "Almost Ideal Demand System" (AIDS) and CBS models have been used. Results from comparison of these models demonstrated that, "Almost Ideal Demand System" (AIDS) is selected as the superior model for prediction in the study period. Then the prediction of major demand for meat groups in areas that mentioned above, Performed until 2025 (twenty-year vision of Islamic Republic of Iran). The results of this prediction, using genetic algorithm method and based on presupposition of continuation for previous incoming and pricing conditions, demonstrated that the share of the budget devoted to red meat, will gradually reduce for urban consumer and the share of the budget devoted to poultry and fish will increase.

The demand rate of households from each these three groups for red meat, poultry and fish will increase. It means that the total demand rate for all kinds of meat will reduce as 2.59 percent every year. And also red meat, poultry and fish are essential (normal) and Successor commodities for urban consumer. On the other hand, red meat and poultry are inelastic commodities and fish is an elastic commodity.

### *JEL Classification:*

**Keywords:** Genetic Algorithms, Almost Ideal Demand Systems(AIDS), The Rotterdam Demand System, CBS Model, Meat Groups. Urban Households

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## **The Impact of Money Supply Increase on Agricultural Prices Compared with Industrial and Services Prices**

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### **Abstract**

Considering the effect of money supply increase on agricultural prices, Identification of the relationships between variables plays an important role in the implementation of appropriate economic policies. This research attempts to probe the equilibrium relationship between money supply increase and the prices of economic sectors focusing on Iran's agricultural sector based on the quarterly time series data set during the period of 1991-2010. For this reason the relationship between variables is analyzed using Johansen's cointegration test along with a vector error correction model (VECM) and later the relationship between variables is extracted using the impulse response functions (IRF). Estimation results indicate that supply money increase has a stronger influence on agricultural prices in the short-run, while industrial and services prices are fixed. In addition, the changes of supply of money in the long-run has direct effect on agriculture, industry and services price, but the strongest impact on agricultural prices is caused by industrial price variability.

**JEL Classification:** C50, E51, Q11

**Keywords:** Money Supply, Agricultural Prices, Vector Autoregressive (VAR)

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**The Analysis of the causal relationship between financial  
repression Indicators and agricultural exports by using  
causal Bayesian networks**

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**Abstract**

The main objective of this study is to analysis the causal relationship between financial repression indicators, along with other Effective factors on the value of agricultural exports .For this purpose, by using time series data, The theoretical foundations,First relation each of the Effective variables on the value of agricultural exports Been defined in terms of causal map and Then by using Principles of causal Bayesian networks is provided independent causal map , Then Under various scenarios to assess the impact of each of the interest variables are discussed. The results show between Indicators of financial repression, the least Impact is relation to the liquidity ratio to GDP and The most Impact is relation to interest rate .Also, between Effective variables on the value of agricultural exports, Variable exchange rate have a greater impact on the value of agricultural exports. Therefore, In order to study propose interest rate cut, As one of the instruments of financial repression is not good policy to encourage domestic and foreign investment and it can affect Exports and economic growth in different sectors. Also, despite the high impact of exchange rate, this policy in order to increase agricultural exports Alone cannot be a successful and efficient policy. Government to promote exports of agricultural products while using the appropriate foreign exchange policies to support and encourage exports of agricultural products, apply policies to promote Agricultural products such as policies to increase productivity of soil and water.

**JEL Classification:** E5, E52, F1.

**Key words:** Financial Repression, Agricultural Exports, causal Bayesian networks

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## The Survey of Relationship between Growth, Employment and Exports in the Agricultural Sector of Iran

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### Abstract

The aim of this study is to consider the relationship between economical growth, export and employment variables in agriculture sector of Iran. To do this, data of 1346 till 1390 were applied. Synchronous relations between these variables contributed to the use of 3SLS system. Results show that agriculture section is affected by employment, productivity of elements working in production group and Capital. Based on the results from a one percent increase in employment growth, investment and productivity in turn 0.3, 0.34 and 0.58 percent growth in agricultural production comes. None of the variables in the growth of agricultural employment growth and real wages in this sector did not show any significant effect. Significant and positive impact on the investment and the export of agricultural employment. A 0.1 percent growth rate in employment growth in the capital led to the screw. A growth rate of 0/04 percent of US farm exports could increase employment. In most agricultural export function variables did not show a significant relationship that Given the choice of variables suggested by economic theory, can be traced Iran's agricultural exports are exogenous. Based on results obtained in promoting value added tax in agriculture, focusing on productivity growth is the most important approach. This can be achieved through training producers and development of technology. Because there is no causative relation from production growth to export growth, to materialize the potential of agricultural exports, marketing approaches are more vital than productive ones.

**JEL Classification:** Q10, F16, Q17, O47

**Keywords:** Agricultural, Employment, Agricultural export, growth

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