

## Forecasting Agriculture Stock Price on Tehran Stock Exchange: Magsal Agriculture and Livestock Company

*A.Chizari, M. Abdollahi<sup>1</sup>*

### **Abstract**

Predicting the agriculture stock prices in Tehran Stock Exchange is greatly helped for investors in making decisions and accepting the agriculture stock price risk. For predicting agriculture price stock three econometric methods are used in this paper; include Auto-Regressive model, Moving Average Process model and Autoregressive Integrated Moving Average Process model. The paper compares these methods in predicting the daily stock price. The selected sample in this research is Magsal Agriculture and Livestock Company stock price which is one of the most active stock companies. Time series data of daily stock price are used from 1389/11/4 to 1390/4/1 period. The results showed that the daily stock price of Maysal company is located at an unstable level and it can become stable by making a difference. Among econometric models ARIMA model is used for predicting because it has a better processing power. Another reason of using ARIMA model is the slight difference between the predicted prices and the actual stock price; it deduces the small percentage of prediction error.

**Keywords:** Models Forecast, Stock price, Magsal Agriculture and Livestock Company, ARIMA model

---

<sup>1</sup> Respectively: Associate Professor and Master of science of Agricultural economics, University of Tehran.  
Email: [abdollahi.mehr@yahoo.com](mailto:abdollahi.mehr@yahoo.com)



## **A Study of factors affecting on the marketing of healthy and organic products**

*V. Borimnejad<sup>1</sup>*

### **Abstract**

This paper discusses the organic agricultural sector from a socio-economical point of view and from a world and regional perspective. The organic food market has been a niche market in world for many decades. In the recent years 'organic' has become a growth, and in some countries, a mature food market due to ongoing governmental support, active marketing of national and international retail chains and constantly growing consumer demand. Organic now belongs to a specific lifestyle and to a finally acknowledged cultural model, which attracts human and financial resources on its own, producing profits and satisfying a steadily increasing market. This paper beginning with a description of the global organic food market analyses organic food marketing in respect to consumer segments and to the four marketing Ps (Product, Price, Place and Promotion). Despite these opportunities, technical, economic, structural and political constraints continue to hinder market development. The paper concluded that there is a need to establish appropriate mechanisms to improve information flows (a) among stakeholder groups; (b) between importing and exporting countries; and (c) among countries within the region itself.

**Keywords:** Organic Products, Healthy Products, Marketing

---

<sup>1</sup> Associate professor, Department of agricultural economics, Karaj Branch, Islamic Azad University, Karaj, Iran  
Email: Vali\_Borimnejad@Kiau.ac.ir

**The Analysis Obligation of Support on the Agricultural Sector in IRAN & WORLD  
(Theory, Lesson of World Experiences, Approach)**

*M.Kazemnejad*<sup>1</sup>

**Abstract**

One of the most controversial discussions in trade and WTO is the protection of agricultural products. In this regard, supporters and opponents offer different arguments. The arguments presented by supporters often focus special attention on the issue of poverty and traditional farmers, Lack of comparative advantage and finally emphasis on impacts of agriculture on production and food security. An issue that has been neglected mainly the lack of theoretical foundations and don't mention to nature of the goods on the market in large parts of the world. Therefore, this article attempts to outline the various approaches of researchers on persist in supporting the agricultural sector .Then with emphasis on the theoretical foundations and nature of the agricultural products, particularly the relationship between elasticity of agricultural products demands and producers income, discussion to this important. Therefore, in this study the relationship between elasticity of demand and support the agricultural sector in different products in different countries under three scenarios, one year (2012), three years (2010-12) and five years (2008-12), were studied. In parallel the methods of protection and amount of support in the countries has been analyzed in various products. Results indicate a significant relationship between the support and elasticity of demand for different products in different countries under the above scenarios. This relationship shows that if the demand elasticity of product to be less therefore the amount of support of that product will be high. Also, survey supporting trends on the agricultural sector indicate that; Protection type and volume of support has changed over time, and in order to effectiveness of this protection the methods that are used to have the least disturb in the market.

**Keywords:** Agriculture, Elasticity of demand, Support

---

<sup>1</sup> Academic member of Agricultural Planning, Economic and Rural Development Research Institute

## Determining of Potential Demand for Drought Insurance and Effective Factors in IRAN

*J. Azizi*<sup>1</sup>

### **Abstract**

Drought is one of the natural phenomena that occur in our country (Iran) every few years. As an important factor in the off farm management, drought insurance plays an important role in modulating the risk of drought. This research was studied in 2013 and it was trying to be evaluated potential demand for drought insurance. Thus, three climate regions included Kermanshah (rainfall zone), Ghazvin (semi rainfall zone) and Sistan-o- baloochstan (dry zone) was selected in the country. Samples were selected from each zone by three-year statistics (2010-2013). The results showed that, there were demands for drought insurance in Kermanshah and Ghazvin in over 20 and 15 Percentage probabilities, respectively. It was also observed in Sistan baloochestan at all of the drought probability levels. As well as, animal husbandry, poultry, subsidy and off farm incomes act as a negative factors on demand of drought insurance.

**keywords** : potential Demand , Insurance , Drought

---

<sup>1</sup> Faculty member of Rasht Branch, Islamic Azad University, Iran  
Email: jafar574@yahoo.com

## Optimizing Exploitation Pattern of Water Resources in Order to Maximize the Social Benefits in Fars Province

*Sh. Shajari*<sup>1</sup>

### Abstract

Development or limitation of agricultural crops planting in different regions should be with respect to the production possibilities and water resources limitation and this emerges need to design a comprehensive model of the cropping pattern. The results showed that crops such as wheat, corn, tomato, onion, watermelon, melon, cucumber and vegetables have comparative advantage however; barley and cotton not have comparative advantage. Nominal protection coefficient for all agricultural crops in Fasa city is calculated less than one and also, the nominal protection coefficient of the inputs indicating make subsidized all inputs are indirectly. Also, the effective protection coefficient for all products of this city is less than one. The results of determining the optimal cropping pattern to goal of maximize the social benefits showed that acreage has decreased which amount 537.37 acres relative to the optimal cropping pattern to goal of maximize private benefits. Furthermore, the results showed that social benefits and gross margin of application of the models for different purposes (maximize the social benefits and maximize private benefits) maximize social benefits and private profits in Fasa city are equal to 782517004014 and 191495971166.27 tomans respectively. In this regard, although Social benefits in maximization model of social benefits is more than social benefits in maximization model of gross margin but gross margin in maximization model of gross margin is more than gross margin in maximization model of social benefits. As a result of this study show that although, the Fasa city in producing agricultural crops such as wheat, corn, tomato, onion, watermelon, melon, cucumber and vegetables have comparative advantage but, in order to maximize the social benefits derived from the exploitation of available water resources (with respect to the real value of water in the model due to lack of water resources) in the agricultural crops group that have comparative advantage, production of crops that require less water is permissible.

**Keywords:** Cropping pattern, Ground water resources, Comparative advantage, Social benefits, Fars province

---

<sup>1</sup> Faculty of Fars Research Center for Agriculture and Natural Resources  
Email: Shajarish@gmail.com

## Take on The Developments, Challenges, and Rules of Conservation and Exploitation of Iran Water Resources

*M. Sabouhi and Sh. Zare<sup>1</sup>*

### **Abstract**

The incidence of prolonged droughts on the one hand and increasing the exploitation of underground water resources on the other hand, have caused that today in Iran, we see the decreasing of aquifers levels and crisis in a lot of plains. Moreover, environmental crisis in the country's lakes and wetlands has made more obvious water crisis than ever. Water rules are one of the important tools for control and improvement the exploitation of water resources. In the current study, the operation of laws enacted in the past and evaluated the adequacy of them for conservation of water resources investigated. The Results emphasis on the revision of laws and creation the suitable conditions for implementation.

**Keywords:** Islamic Parliament of Iran, Water Resources, Unauthorized Wells

---

<sup>1</sup> Associate Professor of Zabol University, Department of Agricultural Economics, and Instructor and Faculty Member of Agriculture & Natural Resources Research Center of Khorasan Razavi. Economical, social and extension Research Group respectively.  
Email:msabuhi39@yahoo.com

## Environmental Degradation Measurement Using Principal Component Analysis Technique in Iranian Metropolises

*H. Amirnejad, M. salari Bardsiri<sup>1</sup>*

### Abstract

Protection of the natural environment is undoubtedly one of the most challenging issues during the decades ahead. As the world's population and production per capita will globally continue to grow in the future, further environmental degradation would be expected. The objective of this study is to measure of the environmental degradation magnitude based on picked out indices using a multivariate technique called Principal Component Analysis (PCA). Since the variables known as the environmental technology such as waste management, women, gender issues related to the environment, corruption, democracy, etc. are not available, these variables cannot be used; Therefore, to aim at the study, other variables were selected, such as gross domestic product (GDP), fuel consumption, relative density of population, access to safe water and sewage system, crude mortality and population based on the latest data in 2009. The results showed that principal component vectors approximately fulfill 70% of variations at the level of environmental degradation. GDP per capita and sewage system variables play prominent roles in classifying provinces in terms of environmental degradation degree compared to fuel consumption and population growth variables. Moreover, in the provinces with a high mortality rate, a higher percentage of the population faces with lack of sewage systems, as well as extra GDP with more densely population and consequently a lower level of environmental quality and conversely. According to the results for each province, it is recommended that appropriate environmental strategies, must be adopted to adjust the main degradation variables.

**Keywords:** Environmental Degradation, Principal Component Analysis, Gross Domestic Production, Sewage system, Population, Iranian Metropolises

---

<sup>1</sup> Respectively: Associate Professor of Natural Resource Economics, University of Agricultural Sciences and Natural Resources of Sari. Master Student of Agriculture Economics, University of Tarbiat Modars.  
Email: hamidamirnejad@yahoo.com, maryamsalari687@yahoo.com



## The Conservative and Improvement Value of Urumiye Lake from Urmian Citizen's Point of View

*B. Hayati, M. Maliki, J. Hosseinzadeh and M. Haghjou<sup>1</sup>*

### Abstract

Because of the special location of the Uremia Lake and its position in the immigration way of immigrant birds, this lake has an enormous environmental importance. There for, studying conservative value of this place could express the importance of its protection, predicting needs, removing scarcities and the investment to protect. There for this research is to estimate conservative value of Urmiya Lake using contingent valuation method. To determine affecting factors on people's willingness to pay, a logit model was estimated using maximum likelihood approach. Required data was obtained through questionnaires and interviewing with 107 individuals who were selected from Urmia's families in 2010 year. Results indicated that 59.1 percents of respondents were ready to pay to protect. Also, results revealed that factors like education, family's revenue, information level about this lake and the environmental desires of respondents had positive and significant effect, while amount of bid a had negative and significant effect on probability of willingness to pay of respondents. The annual mean value of WTP for protecting current situation of the Urmiya lake is 122500 Rls and for the improvement of its condition is 149800 Rls. Also the estimated total improvement value of the lake was 23019.9 million RLs. Trying to extend society's awareness and supporting environmental NGOs besides more concentration on Urmiya Lake's protection are suggested in this research.

**Keywords:** Conservative value, Contingent valuation, Logit model, Urmia Lake, Willingness to pay

---

<sup>1</sup> Respectively: associate professor, master of science, associate professor and phd student of agricultural economics of Tabriz university  
Email: b-hayati@tabrizu.ac.ir

## Investigation of Effective Factors on Food Security in Iran

*H. Mehrabi and A. Owhadi<sup>1</sup>*

### **Abstract**

Attention to food security in Iran is one of the main objectives of the rural development and agricultural programs and the government is doing the relatively wide range of actions to improve that. Food security is a very widespread concept and is determined by interacting a range of biological, economic, social, agricultural and physical factors. Food security is a goal that other important economic objectives are latent behind it, each one is very important. In this study the factors affecting the food security in urban and rural households examined during the period of 1983-2010. To do this, first aggregate food security index for urban and rural households and other indicators used in the study was calculated. Then, by using the approach of Johansen - Juselius the econometric analysis was carried out. Results show that the crop diversification variable, Per capita income and imports of agricultural products have significant and positive impact. Gini coefficient and the policy of government support to agriculture have significant and negative impact on food security of urban and rural households. Prices of agricultural products in rural areas have positive impact and in urban areas has negative impact on food security.

**Keywords:** Food security, Rural and Urban households, Cropping diversification, Food price, Income distribution

---

<sup>1</sup> Respectively: Professor and Master of Science agricultural economics of shahid bahonar Kerman  
Email: hmehrabi2000@gmail.com

## **Lessons from Agricultural and Water Resources Development in China and India**

*N. Shahnoushi Froshani, S. Shahhossein Dastjerdi, Y. Azarinfar and R.  
Mohamadzadeh<sup>1</sup>*

### **Abstract**

The main purpose of this study is offering lessons from agricultural and water resources development in China and India in different period for agricultural and water resources development of Iran. For this purpose, important policies in these countries are analyzed during 1961-2012. According to results, India and China using different approaches for solving problems in agriculture and water resource sectors that use of them are suitable for Iran. In this study, lessons from agricultural and water resources development for Iran are provided.

**Keywords:** Development, Agriculture, Water Resources, China, India

---

<sup>1</sup> Respectively: Professor of Agricultural Economics and Postgraduate of Agricultural Economics of Ferdowsi University of Mashhad, MS in Agricultural Planning Economic & rural Development Research Institute , Agricultural Economics researcher  
Email: shahnoushi@um.com

## **New Approach to Agriculture Sector: Environmental Costs of Agri-Sector in Iran**

*G.A. Sharzei, V. Majed<sup>1</sup>*

### **Abstract**

Although agricultural activities have economic benefits such as increased production and national income, create jobs and provide food for the community but it also influenced the environment and human health because of the negative side effects. These effects called externalities in production in economics literature and are generally there is no market for them. These externalities could be seen in, water resources, soil, air and human health sectors. This paper uses published information to analyze the externalities of agriculture sector in Iran. In this regard, the amount of chemical fertilizers and pesticides used in this sector and comparison between Iran and some selected countries will be discussed. The results indicate that for one dollar of value added in Iran's agriculture sector; consumption of fertilizer, nitrates, pesticides is more than industrialized countries. Besides these, over using of water in Iran's agricultural sector leads this sector externality to be high. Therefore, the regulatory policies and standards as well as the use of economic instruments such as taxes and tariffs and other motivational factors are required to reduce externalities and facilitate achieving sustainability in the sector and other sectors of the economy.

**Keywords:** Agriculture Sector, Externalities, Environmental Damages

---

<sup>1</sup> Respectively: Assistance Professor and Assistant Professor of Economics of Tehran University.

Email: sharzeie@ut.ac.ir and majed@ut.ac.ir

## **Determining the Same Risk Areas for Potato Yield Frost Risk in Iran: The Application of Spatial Econometrics**

*M. Tahami Pour and H. Salami<sup>1</sup>*

### **Abstract**

The nature of climate risks such as drought and frost is such that at the time of their occurrence, large areas are affected. Understanding the spatial extent of the impact of such risks is very important to prevent and cope with their devastating consequences. Hence, the purpose of this study is to determine the spatial dependence between potato production areas in the country and identify areas with similar risk of frost. To this end, spatial autoregressive models were used. Results indicated that between the cultivated variety of spring, summer, fall and winter potatoes in the country, just about fall potato planting areas (with a share of 72 percent of the potato acreage) yield risk is systematic. In fall planting region, the intensity of the spatial correlation between areas with similar risk assigned to neighboring varies from 0.37 to 0.72 is fluctuating. The precipitation changes over the years have played an important role in establishing this correlation. Based on the results obtained and climate divisions and neighborhoods identified in this study, it is possible to determine the optimal portfolio of insurance for the potato crop that guarantee to reduce financial risk of insurance fund and yield risk of potato.

**Keywords:** Potato, Frost, Systematic Risk, Spatial Autoregressive Models, Iran.

---

<sup>1</sup> Respectively: professor of Agricultural Economics of University of Tehran and Assistant professor of University of Shahid Beheshti  
Email:hsalami@ut.ac.ir

## **Change of Agricultural lands use and Economic- Environmental Damages**

*S. Yazdani, S. Hashemi Bonab<sup>1</sup>*

### **Abstract**

The economic and population growth in Iran has been resulted in conversion of agricultural lands to urban and industrial uses. This paper attempts to estimate the environmental and economic value of agricultural lands which has been converted to industrial and residential use. The results indicate that the environmental value of per hectare paddy is about 310 million rials each year in Mazandaran Province. Whereas, production value of land was about 120 million rials. Comparing these figures, it would be suggested that in a cost and profit analysis of land the opportunity cost of land use change also should be considered.

**Keywords:** Land use change, environment, economic, non-market value, Mazandaran

---

<sup>1</sup> Respectively: professor of Agricultural Economics University of Tehran and Associate professor of Agricultural Economics of urmia  
Email: syzdani@ut.ac.ir

## Effects of Exchange Rate Policy on Iran's Agricultural Subsections Support Estimates

*S.S. Hosseini, E. Mehrparvar Hosseini<sup>1</sup>*

### **Abstract**

Formation of a strong agricultural sector requires the implementation of appropriate support policies that without a picture of the support structure is not available. In this study, producer, consumer, total and general services support estimate indices (PSE, CSE, TSE, GSSE) have been calculated for agricultural products using real and equilibrium exchange rates and effects of exchange rate misalignment has evaluated for 1981-2010 and forecasted from 2011 through 2015. Results revealed that the estimated level of agricultural support estimates were sensitive to exchange rate, pricing and budget policy of state. Return to continuous change in agricultural policy, these indices have many fluctuations. So that, during the 1981-88 because of over valuation of rial, PSE was 4/14 percent. While in 2005-2010, undervaluation of riyals induce producers to pay 3/10% from their income as a hidden tax that CSE sign was inverse of it. TSE of Agriculture and livestock sub-sections was possitive for most years, as horticulture subsector TSE index was negative. It is recomended, combining sectoral and exchange rate policies through increasing global competitiveness, support agriculture producers and consumers.

**Keywords:** Agricultural subsections, Producer support estimation, Consumer support estimation, Total support estimation, exchange rate misalignment

---

<sup>1</sup> Respectively: professor and Master of science of Agricultural Economics, University of Tehran  
Email:mehrparvar@ut.ac.ir

## Agricultural water use efficiency revisited Focusing on environmental water rights

*GR.Soltani*<sup>1</sup>

### **Abstract**

Agricultural water-use efficiency studies in Iran have mainly focused on a local scale (farm or project) without considering and linking them with basin and global efficiency levels. Moreover, it is indicated that the classical concept of physical water-use efficiency is concerned with local and ignores the potential for return flows and recycling. Hence, the findings of these studies are not appropriate for policy recommendations about water allocation at the basin or global levels.

Due to continuous and integrated nature of hydrological cycle, it is essential to consider the whole cycle in addressing water-use and water application technology problems. This study moves beyond the traditional practice of analyzing the agricultural water-use efficiency by considering and linking together three levels: local, basin and global, including the possibility of virtual water import and export and their environmental impact. In conclusion, based on some studies elsewhere and field observation in Iran, some caveats and limitations in choosing water-saving irrigation technology and methodology used were indicated.

**Keywords:** water use efficiency, water productivity, Integrated Management of Water Resources, Return flow, Environmental right of water

---

<sup>1</sup> Professor of Agricultural Economics in University of Shiraz  
Email: grsoltani@gmail.com



## **New Generation of Agricultural Cooperatives: World Experiences and Lessons for Iran**

*B. Najafi*<sup>1</sup>

### **Abstract**

Increasing need to include marketing in agricultural cooperative activities, in one hand, and a need to adapt traditional cooperative to new situation, on the otherhand, have caused agricultural cooperatives, especially in developed countries, in response to new demand facing fundamental changes. One of these innovations is development of market – oriented cooperatives with special characteristics called "new generation cooperatives". This paper aims, first, to review some criticism made in the literature in relation to traditional cooperative principles, second, reviewing the principles and new experiences related to new generation cooperatives and finally, pointing out lessons that could be learned from these experiences to assist policy makers in order to bring about some reforms in the structure of agricultural cooperatives in Iran.

**Keywords:** Agricultural cooperatives, Market-oriented, Production-oriented, Innovation, Iran.

---

<sup>1</sup> Professor of Agricultural Economics, Free Islamic University, Marvdasht, Iran.  
Email: banajfi@gmail.com

# ***ABSTRACTS***



## **Contents:**

New Generation of Agricultural Cooperatives: World Experiences and Lessons for Iran

**B. Najafi**

Agricultural water use efficiency revisited Focusing on environmental water rights

**GH. Soltani**

Effects of Exchange Rate Policy on Iran's Agricultural Subsections Support Estimates

**S.S Hosseini and E. Mehrparvar Hosseini**

Change of Agricultural lands use and Economic-Environmental Damages

**S. Yazdani and S. Hashemi Bonab**

Determining the Same Risk Areas for Potato Yield Frost Risk in Iran: The Application of Spatial Econometrics

**M. Tahami Pour and H. Salami**

New Approach to Agriculture Sector: Environmental Costs of Agri-Sector in Iran

**Gh.A. Sharzehi and V. Majed**

Lessons from Agricultural and Water Resources Development in China and India

**N.Shahnoushi, S.Shahhossein Dastjerdi, Y. Azarinfarand and R. Mohamadzadeh**

Investigation of Effective Factors on Food Security in Iran

**H. Mehrabi and A. Owhadi**

The Conservative and Improvement Value of Urumiye Lake from Urmian Citizen's Point of View

**B. Hayati, M. Maliki, J. Hosseinzadeh and M. Haghjou**

Environmental Degradation Measurement Using Principal Component Analysis Technique in Iranian Metropolises

**H. Amirnejad and M. salari Bardsiri**

Take on The Developments, Challenges, and Rules of Conservation and Exploitation of Iran Water Resources

**M.Sabouhi and Sh. Zare**

Optimizing Exploitation Pattern of Water Resources in Order to Maximize the Social Benefits in Fars Province

**Sh. Shajari**

Determining of Potential Demand for Drought Insurance and Effective Factors in IRAN

**J. Azizi**

The Analysis Obligation of Support on the Agricultural Sector in IRAN & WORLD (Theory, Lesson of World Experiences, Approach)

**M.Kazemnejad**

A Study of factors affecting on the marketing of healthy and organic products

**V. Borimnejad**

Forecasting Agriculture Stock Price on Tehran Stock Exchange: Magsal Agriculture and Livestock Company

**A. Chizari and M. Abdollahi**



***Agricultural Economics***  
***Journal of Iranian Agricultural Economics Society***

**Special Issue 2014**

**Publisher:** Iranian Agricultural Economics Society  
**Managing Director:** Saeed Yazdani, PhD, Tehran University  
**Editor-in-Chief:** Seyed Safdar Hosseini, PhD, Tehran University  
**Editorial Manager:** Hamed Rafiee, PhD, Tehran University  
**Executive Manager:** Samaneh Khodabakhshi, M.Sc.

**Editorial Board:**

<i>M. Bakhshoodeh, PhD</i>	<i>Shiraz University</i>
<i>S. Hoseini, PhD</i>	<i>Tehran University</i>
<i>S. Dehghanian, PhD</i>	<i>Ferdowsi University of Mashhad</i>
<i>H. Salami, PhD</i>	<i>Tehran University</i>
<i>G.R. Soltani, PhD</i>	<i>Shiraz University</i>
<i>G. Sharzei, PhD</i>	<i>Tehran University</i>
<i>D. Salehi- Isfahani, PhD</i>	<i>Virginia Polytechnic Institute and State University</i>
<i>M. Koopahi, PhD</i>	<i>Tehran University</i>
<i>R. Mohammad Rezaei, PhD</i>	<i>Tabriz University</i>
<i>H. Mehrabi Boshrahadi, PhD</i>	<i>Kerman University</i>
<i>B. Najafi, PhD</i>	<i>Shiraz University</i>
<i>S. Yazdani, PhD</i>	<i>Tehran University</i>

**Address:** Journal of Agricultural Economics, Collage of Agricultural Economics and Development, Agriculture & Natural Resource Paradise of Tehran University, Karaj, Iran.  
**Tel:** (+98) 26-32222767  
**Fax:** (+98) 26-32247783  
**Email:** [iaes.journal@gmail.com](mailto:iaes.journal@gmail.com)  
**www:** [iranianjae.ir](http://iranianjae.ir)