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## Removing Non-Tariff Barriers in Iranian Economy and Its Impact on Agriculture and Rural Welfare

*Z. Farajzadeh , M. Bakhshoodeh*

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### **Abstract**

This study aims at investigation of the possible impacts of non-tariff barriers reduction on agriculture macro variables and rural welfare. To get the objective a computable general equilibrium framework based on the Iranian social accounting matrix of 1999 was used. At first tariff equivalence of non-tariff barriers was calculated based on price gap approach using the data for 2009. Then the tariff equivalence was incorporated in the model. Welfare impacts were examined in terms of Equivalent Variation (EV) for the income deciles. The findings of the study showed that reduction in tariff equivalence of non-tariff barriers of agricultural sectors and agricultural dependent industries results in lower output and prices of agricultural products such that these price and output changes exceed the corresponding welfare increment. However reduction in non-tariff barriers of non-agriculture sectors results in higher output in agricultural sectors as well as welfare improvement for rural households. It was also found that reduction in non-tariff barriers of Iranian economy as whole results in lower agricultural output and prices; however the welfare improvement exceeds the corresponding output and price changes. We also found that higher income deciles enjoy more welfare gains comparing to the lower ones as removing non-tariff barriers. Based on the findings gradual reduction in agricultural non-tariff barriers after reducing them in non-agriculture sectors and in association with temporary supporting programs is suggested.

**JEL Classification:** Q17, F13, F14

**Keywords:** Agriculture sector, Non, tariff barriers, Tariff equivalence, Rural welfare

## The Welfare Effects of Reform in Food Subsidy Policy in Iran: Application of Computable General Equilibrium Model

*A. Karami , A. Esmaeili , B. Najafi , A. Banouei*

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### Abstract

Government's payment of subsidies is a supporting policy for social and economic sectors. A goal of establishing social subsidies is protection of low-income groups and increasing welfare. In recent years the government has taken steps in way of reforming and reduction of food subsidy. Impacts of Iranian food subsidy reform policies on household welfare are investigated in this study using a Social Accounting Matrix (SAM) based on Computable General Equilibrium (CGE). The SAM belongs to 2000. The result showed that cash payment of food subsidy has increased household welfare but untargeted of food subsidy did not reduce expenditure of government. Therefore the expenditure of food subsidies by the government must be considered as well as the household's welfare. It is suggested that the cash payments to food subsidies should be targeted to low income groups.

**JEL Classification:** D58, D63, P36

**Keywords:** Food Subsidy, Welfare, Computable General Equilibrium Model, Social Accounting Matrix

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## Analysing Corn Price Fluctuations and Cycles Using GARCH Model and Harmonic Pattern

*N. Shahnoushi , B. Fakari and M. Kojouri*

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### **Abstract**

Corn as the third strategic agricultural product (after wheat and rice) is one of the most important crops. In addition (to poultry feed) it is used to produce edible oil (starch) (glucose) (and raw material in industrial production of ethanol and some other products. Slight increase and low volatility in prices of goods and services will result in stability and sustainable economic growth (promote social and economic development. In this study (the cycles and fluctuations in corn price are analyzed applying Harmonic pattern and GARCH model respectively to daily prices of corn from Iran Agricultural Mercantile Exchange (since 14.10.2007 till 11.10.2011. Harmonic analysis results indicate long-term cycles in a period of 21 months in analyzing period. GARCH model results showed that corn price fluctuations cause more fluctuations in corn future prices (in addition the error terms that has less contribution in conditional variance. However (the guaranteed price spend a lot for government (it was not able to control price fluctuation. Therefore (policymakers should provide a proper condition to encourage sellers and buyers to deal in Agricultural Mercantile Exchange and use future and option contract.

**JEL Classification:** Q11, C51, C13

**Keywords:** Corn, Iran Agricultural Mercantile Exchange, Price fluctuations, Harmonic Pattern, GARCH Model

## **Estimation of Transaction Costs of Obtaining Formal Credits by Farmers (Case study: Golestan Province)**

*S. Ahmadi Kaliji , A. Darijani*

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### **Abstract**

The main reason why farmers lack access to formal financial are concerned to limitations of high transaction costs in the system of credits. The objective of this study is to estimate transaction costs of obtaining credits in formal financial institutions provide facilities by farmers in Golestan Province. Data were gathered from farmers selected through simple random sampling in Golestan province in 2011. Our findings suggest that payments to the guarantor ,direct and opportunity cost of obtaining facilities are the largest costs that farmers have to pay for obtaining facilities of financial resources. To reduce transaction costs ,increasing banking productivity ,flexibility on credit payments ,facilitation of the lending process especially in obtaining securities ,and mechanization of operations are recommended.

**JEL Classification:** G21, G28

**Keywords:** transaction costs, credits, financial institutions, farmer, Golestan Province

## Survey of technical efficiency of Barberry producers in South Khorasan Province

*A. Dourandish , M.R. Kohansal , N. Shahnoushi Forushani , M. Hosseinzadeh*

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### Abstract

Barberry is one of the most important products in Southern Khorasan province. The share of this province in total of Barberry production in Iran is about 98 percent. The objective of this study is to survey the factors that affect barberry production ,calculating barberry producer's technical efficiency and determining the factors that affecting producers' efficiency in Southern Khorasan Province. The data was obtained using cluster sampling method and questionnaire completion from 90 farmers of this province in 2011. Cobb - Douglas production function was used to survey the factors affecting the barberry production. Results showed that labor ,land ,efficient or inefficient year and irrigation have the most significant effect on Barberry production respectively. Also ,Results of Calculating technical efficiency and factors affecting technical efficiency show that the average technical efficiency of barberry producers is 81% and the highest and lowest scores are 99% and 34% ,respectively. Also ,experience ,the main job and the number of family labor have a direct and significant effect on efficiency. Using new methods of irrigation to enhance the efficiency of irrigation and holding training classes to enhance the experiences of barberry producers is suggested.

**JEL Classification:** D2, D6, E2

**Keywords:** Barberry, Production function, Technical efficiency, Southern Khorasan province

**Recreation and environmental value of Zayanderud river flow in Esfahan City: A double bounded discrete choice approach**

*A. Nikouei , M. Zibaei*

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**Abstract**

Valuing the ecosystem services provided by flowing rivers especially in urban riverside parks is a way to the productive management of basin's water allocations and uses. This paper attempted to quantify the value of Zayamderud river flow in Esfahan City using a double bonded discrete choice approach. A survey including 430 randomly selected visitors of this area was used to do this in 2010. The results reveal when respondents face the follow-up bids they learn to revise their willingness to pay related to their income and education level while the social variables including age, sex, and household size has no effect on their repeated choices. This behavior made the average willingness to pay for uses and non-uses of flowing river across urban riverside parks of Esfahan equaled by 11,400 IRR monthly per each household who are resident in or out of Esfahan City. If this value is implemented in the basin's water resource management measures, a cost-effective way would be achieved to raise utility of river visitors.

**JEL Classification:** H41, O26, Q51, R11

**Keywords:** River, willingness to pay, environmental economic, double bonded discrete choice

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**Investigating spatial integration of the Caspian Sea's bony fish markets; Practical approach of the seasonal co-integration of in monthly data (Text in Persian)**

*H. Rafiee , S. Yazdani , S. S. Hosseini , A. H. Chizari , H. Salehi*

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**Abstract**

Investigation of spatial integration (convergence) as an indicator of the efficiency of markets and test of Law of One Price (LOP) in these markets in the literature of market structure is very important. Seasonal nature of the monthly price series provides different conditions. Therefore in this study spatial integration of Marine Bony fish markets in Guilan and Mazandaran at least 120 months during 2001:1 to 2010:12 will be investigated. Given that fishing season is from October to late April for the remaining five months (May to September) has been used from registered prices by Iranian Fisheries Organization. In this study a new approach of investigating seasonal unit root and estimating the Seasonal Error Correction Model (SECM) have been used. The results show that there is seasonal co-integration in types of fish market and spatial markets in two provinces of Mazandaran and Guilan obey from LOP. Therefore this long-term seasonal dynamics in error correction calculations and forecasting future situation of price behavior in the fish markets must be considered. Otherwise price policy and market planning in order to achieve suitable spatial efficiency in the long run will fail.

**JEL Classification:** L11, Q13, M31

**Keywords:** Seasonal Unit Root, Seasonal Co, Integration, Spatial Convergence

**An Economic-Risk Analysis of Alternative Rotations by  
Stochastic Simulation and Ranking with Stochastic  
Dominance (Text in Persian)**

*A. Sheykh Zeynodin and M. Bakhshoodeh*

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**Abstract**

In this study stochastic simulation is applied to historical data of a hypothetical farm in Fars province to investigate economies of cultivating legume in alternative rotations. Second degree stochastic dominance (SSD) and stochastic dominance with respect to function (SDRF) were utilized for this purpose. Results showed that cereals-oilseed with onion and legume rotation is most preferred for risk neutral decision makers and cereals-oilseed with legume rotation is most preferred for risk-averse decision makers. Therefore including a legume crop in rotation can reduce amount of nitrogen required by a subsequent crop and increase the net present income associated with that rotation. Based on the findings considering these crops in rotations are recommended for Fars province.

**JEL Classification:** C15, C16, C46

**Keywords:** Stochastic simulation, stochastic budgeting, stochastic dominance, multivariate empirical probability distribution, Fars



**Price and Non-Price Factors Effects on Wheat Cultivation  
Acreage in Provinces by Using Panel Data (Text in Persian)**

*A. Garshasbi , K. Yavari , R. Najjarzade , M. Homayunifar*

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**Abstract**

Wheat is important crop in Iran with 52.2 percent of the acreage in field crops at country. Wheat acreage is the most important component in supplier reaction to price changes. Therefore ‘any change in wheat acreage would change wheat supply and have irreparable consequences for the country’s economy. This study used the Nerlove basic model with panel data and adaptive expectation to investigate affecting price and non-price factors on wheat acreage in all provinces of Iran. Result indicated that the acreage of wheat with a lag has important effect on the wheat acreage. Government price support policy is not effective on wheat acreage alone. Because ‘on one hand ‘ there is a little orientation between these two variables and on the other hand ‘ to a large extent ‘it depends on government policies at alternative products such as barley.

**JEL Classification:** Q10, Q18, Q19

**Keywords:** Wheat, adaptive expectations and acreage, panel data

## **The Role and Performance of Iran Agricultural Mercantile Exchange in Agricultural Products (Text in Persian)**

*B. Fakari Sardehae , N. Shahnoushi , H. Mohammadi , A. Mirzapour , A. Dourandish*

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### **Abstract**

Agriculture is a risky activity and existence of price risk may have a negative effect on agricultural production and farmers' income. Due to this reason ' agricultural commodity exchange market can be a proper tool to deal with this kind of risk. All around the world 'agricultural commodity exchange has an important role in price determination. In this study impacts of some important indicators that have effect on price determination in Iran Agricultural Mercantile Exchange are investigated applying Analysis Network Process (ANP) to cross-sectional data in 2012. The result showed that import is the most important factor in price determination in Iran Agricultural Mercantile Exchange 'so establishing agricultural mercantile exchange in different regions can be very helpful for agricultural sector.

**JEL Classification:** C19, E30

**Keywords:** Iran Mercantile Exchange, Price determination, ANP

