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ABSTRACTS

Measuring Effects of Rial Appreciation on the Level and Structure of Domestic Support in Iran

O. Gilanpour and M. Hejazi[*]

This paper theoretically explains how AMS, criteria for measuring domestic support in AOA, is affected by distorting exchange rate and how Rial appreciation by government intervention in exchange market changed the level and structure of domestic support in Iran between 2001 and 2005.Our Results shows that Rial appreciation causes to overestimate the share of price supports to AMS in all years, overestimating AMS in 2002, 2004 and underestimating in 2001, 2003, 2005. This reveals that net effect of exchange rate on AMS depends not only on the manner of support but also on the distortion size in price support and inputs subsidies.

JEL Classification: Q18, F13, F31

Keywords: Exchange rate, AOA, AMS, Rial, Iran

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Provincial Analysis of Broiler Husbandry Industry Performance

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In this study, performances of the Iranian broiler husbandry industry and its growth potential have been calculated applying Total Factor Productivity (TFP) Tornqvist-Theil index to the data collected by the Iranian Statistical Center in 1990, 1994, 1995 and 2001. The results show that TFP index has been improved from 85.5 percent to 99.1 & 108.6 percent in 1994 and 1995 respectively. But its performance has been declined in 2001 by 13 percent due to implementing "Exchange Rate Unification" policy in 1990. In other words, sudden elimination of indirect subsidies caused technical efficiency of industry to decline. In addition, local comparison of chicken meat producing firms shows that difference between low and high performance provinces has been increased from 12 percent in 1994 to 35 percent in 2001. It implies that non symmetric industry growth has been carried out in this period and there is deep gap between average production costs of chicken meat production in different Iran provinces.

JEL Classification: D2

Keywords: chicken meat, performance, total factor productivity, Tornqvist-Theil

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Application of Risk Profile in Crop Products Risk Management of North Khorasan Province (Case Study of Sugar Beet)

M. Ghorbani, A.R. Koocheki, M. R. Kohansal and F. Jafari[*]

In this paper, we employed risk profile analysis to study sugar beet risk management in North *Khorasan*. To design the risk profile, we used data from 120 sugar beet producers for the period of 2005-2007. For evaluating of losses related to each risk component, two indexes of frequency and severity of risk were calculated and based on that risk matrix were created. Results showed that area with low risks have largest frequency risk. In 2006, relatively to 2005, frequency of wild animals attack increased and impact risk of not receiving credit on time decreased while the risk impacts of wild animal's risk, high cost of credit, unskilled labor, weeds, lack of labor and decreasing production subsidy increased comparing to those in 2007. Based on the findings, use of risk profile is suggested in risk management and designing of insurance coverage and models.

JEL Classification: Q1, D2, D81

Keywords: Sugar beet, risk matrix, classify criteria, risk

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The Role of Rural Cooperatives in Decreasing Transaction Costs of Obtaining Credits

S. S. Hosseini and M. Khaledi[*]

The main goal of this research is to investigate the role of rural cooperative in deceasing transaction costs of obtaining financial credits. At first, the transaction costs components of obtaining *Garzolhasana* (Qard Hassan) funds according to different financial institutions (banks, Qard Hassan funds and rural cooperatives) are estimated. Then, total transaction cost of obtaining credits is compared among the banks, Qard Hassan funds and rural cooperatives. The data were collected by a survey applying a multi-stage sampling technique in 2005. The results reveal that the transaction costs of gaining credits are equivalent to 97000 Rials, that is, an additional 10.68 percent annual interest cost. The ratio of transaction costs to total loan is 8 percent for rural cooperatives and is lower than those of banks and Qard Hassan funds. In sum, we can deduce that rural cooperatives can play an important role in decreasing transaction costs of obtaining credit and therefore facilitate accessing to financial markets.

JEL Classification: C8, C21, D1, Q14

Keywords: Transaction costs, Islamic contracts, credit markets, rural households

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Investigating Vulnerability to Poverty in Rural Fasa Township

A. R. Shirvanian and M. Bakhshoodeh[*]

In this study, vulnerability to poverty was investigated at micro level applying risk exposure criterion, augmented absolute poverty line, and FGT indices were applied to a sample of 120 households in three villages of *Fasa* Township, in Fars, Iran. Data in 2007 were collected randomly by interviewing and completing corresponding questionnaires. Based on the results, while nearly 47% of households are considered with minimum risk exposures, 40% have always the highest risk exposure levels and are vulnerable to poverty risk all the times. Poverty is a threat for the rest of families who are non-poor but vulnerable to poverty. Moreover, the results indicated that in order to have a perfect removal of poverty, households must be compensated much more than amounts needed to achieve absolute poverty line level. Furthermore, the impacts of each unit of supports to poor increase significantly with taking risk exposure criteria into account. Finally, risk exposure influences inner layers of poverty and may lead to more and quick decreases of poverty depth.

JEL Classification: DI, D8, I3, R0

Keywords: Risk exposure; augmented absolute poverty line; vulnerability to poverty; rural poverty; Fasa

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Evaluating Technical Efficiency of Aviculture Units by Stochastic Nonparametric Approach in the Sistan Zone

E. Mojarrad, A. A. Kahkha and M. Sabuhi Sabuni[*]

In this study, technical efficiencies of *Sistan* aviculture units were estimated applying stochastic nonparametric approach to data collected from 41 active aviculture units in 2005. In previous studies, technical efficiency of firms is analyzed by any of two main methods: parametric stochastic frontier analysis (SFA) and nonparametric data envelopment analysis (DEA). In this study, technical efficiency was estimated with combining these approaches in a unified framework. The results showed that the vast majority of the units are technically efficient with a score of 94 percent on average. However, 48 percent of the units have exhibited constant returns to scale, 43 percent increasing returns to scale and 7 percent Non - increasing returns to scale. Considering the findings, increasing inputs productivity and offering relevant supportive policies in respect to input and output markets are emphasized for increasing of product and improvement of technical efficiency.

JEL Classification: C6, C21, D2, H21

*Keywords***: Stochastic nonparametric approach, technical efficiency, aviculture, Sistan**

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Determination of Preservation Value for Kor River in Fars Province: Application of Willingness to Pay

A. Esmaeili, and S. Ghazali[*]

The preservation value of *Kor* River and individual willingness to pay (WTP) is determined by contingent valuation (CV) method. There are several environmental services including agricultural production; fishery and recreation supplied by the *Kor* River. The logit model and maximum likelihood method are used to evaluate individual willingness to pay. The results show that 57% of households agree to pay for preservation of *Kor* River. The maximum willingness to pay for preservation and maximum receive due to degradation of *Kor* River is calculated to be 66193 and 90000 Rials (household/month), respectively. So willingness to accept is 36% more than willingness to pay. The mean of WTP for preservation is calculated to be 286 Rials (household/year). The low preservation value shows that the people are not aware about the River benefits. So, it is necessary for policy markers to attempt households' attention through further education and extensional programs to avoid degradation of this River.

JEL Classification: Q25, Q51

Keywords: Kor river, preservation value, contingent valuation, willingness to pay, Logit model

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Water Pricing in Agricultural Sector Using Interval Mathematical Programming: The Case Study of Dashtestan

M. Ahmadpour and M. Sabuhi Sabuni *

In this study, irrigation water pricing was investigated as a tool for under ground water demand management in *Dashtestan* district. The data were collected by interviewing pioneer farmers. Applying present worth procedure, the factor cost of each cubic meter of water was obtained to be 84.96 Rials. On the other hand, shadow price of water (i.e. marginal productivity of each cubic meter of water) was obtained in interval [178 , 2328] in sparing, [364 , 549] in summer and [210 , 1802] Rials in fall and winter by Interval Mathematical Programming (IMP). Moreover, water normative demand function for various seasons and years were estimated in order to study water pricing effectiveness. Results indicated that farmers pay much lower than the real value of water in framework of water extraction costs. The results of normative demand function estimation indicated that demand for irrigation water in various seasons is inelastic with respect to water price changing in these seasons and is more inelastic for the years. In fact, farmers react against increasing water price not only as decreasing in consumption at same season, but also with reallocating a part of water in the year. Based on the findings, water pricing policy is not very effectiveness on diminishing consumption of irrigation water.

JEL Classification: C02, C61, Q12, Q25

Keywords: Under ground waters, water pricing; interval mathematical programming

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Calculating Agricultural Water Sustainability Indexes by Fractional Programming Model (The Case Study in Marvdasht)

S. N. Musavi and F. Gharghani[*]

Sustainable use of limited water sources has great importance in agriculture sector as the largest water consumer (90-95 percent). According to economic theories, we can use stability as an index in agricultural systems management by quantifying agricultural water stability. Multipurpose non-linear fractional programming model is applied method of studying sustainability of agricultural systems that evaluates and compares different indexes imposing equal weights. Because of the importance of the agricultural consuming water rate, stability indexes of ratio of gross income to water usage (3.06, 0.530) and ratio of employment to water usage (0.265, 0.072) were calculated in two scenarios in agricultural year 2006-07 in *Marvdasht* town. Crop water consuming may be reduced through new irrigation technology and increasing irrigation efficiency that in turn increase these indexes and indicates movement in agricultural water stability.

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Determining Comparative Advantage of Cereals (Wheat, Barley, Corn) in Jiroft and Kahnooj

M. Saei[*]

Comparative advantage is one of the most important economic criteria in production, import and export programming. In this survey, two group of comparative advantage recognition indices is used to investigate existence of the cereals production comparative advantage in *Jiroft & Kahnooj* in 2006-2007. The SCB, DRC and NSP are the first indexes and EAI, SAI and AAI are the second. Based on the findings, none of the cereals had the comparative advantage. Corn comparative advantage in the region was more than the country average. The calculated protective coefficients and PAM matrix showed that producers are paid indirect subsidies in form of output and inputs and also gain more profit by government intervention comparing to free trade.

JEL Classification: F13, Q17, Q18

Keywords: Cereals, comparative advantage, domestic resource cost, Jiroft and Kahnooj, social cost benefit

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