Application of Game Theory for Groundwater Resources Management of Atrak Basin

M. Sobuhi[1*] – E. Mojarad[2]

Abstract

Atrak Basin is an agricultural area in North Khorasan province that the most farmers are using from groundwater resources for irrigation their crops. Decreasing rainfall in recent years in this area, competition between urban, agriculture and industrial consumers has increased for water acquisition. In present study, game theory was applied for groundwater resources management of Atrak Basin. Optimal extraction quantity of groundwater resources were quantified with using Pareto frontier curve and four conflict resolution methods for 6 alternative groundwater extraction scenarios. The results showed that, when environmental and economic objectives are assigned equal weight or importance, the best scenario is to extract between 64 and 117 million cubic meters each year. Ultimately, optimal decision making depends on the relative importance weights assigned to the conflicting objectives.

Keywords: Conflict resolution method, Game theory, Groundwater resources manage- ment, Atrak Basin

1,2 - Assistant Professor and PhD Student of Department of Agricultural Economics, University of Zabol, Respectively
(* - Corresponding author Email: msabuhi39@yahoo.com)

Factor Analysis of Factors Affecting Entrepreneurial Mentality of Graduate Students (Case Study: University College of Agriculture & Natural Resources, University of Tehran)

J. Ghasemi[1*] – A. Asadi[2]

Abstract

 The purpose of this descriptive– survey research was to analyze effective factors on entrepreneurial mentality of graduate students of University College of Agriculture & Natural Resources, the University of Tehran. The statistical population of the study consisted of 686 persons of graduate students (M.Sc. & PhD levels), out of which 97 people determined as sample using Cochran Formula and proportionate stratified sampling technique. The sample size was later increased to 150 people for enhancing precision of the study. A questionnaire was the main tool of study. The validity of the questionnaire was approved by the judgment of a panel of faculty members of the Department of Agricultural Extension Education who were assumed here as experts. In order to measure the reliability of the questionnaire, Cronbach Alpha coefficients were calculated for the main scales of the questionnaire which ranged from 0.79 to 0.93 indicating that the tool of study is reliable. The data were analyzed by SPSS-win software. To identify effective factors on entrepreneurial mentality of graduate students, R-type factor analysis was used. The results showed that educational, psychological, communicational and university factors extracted from factor analysis explained 50.46 percent of variance.

Keywords: Educational factor, Entrepreneurship, Communicational factor, Psychological factor, University factor

1 ,2- MSc degree and Associate prof., College of Economics and Agricultural Development, Respectively, University of Tehran
(* - Corresponding author Email: javadghasemi710@gmail.com)

Price Transmission Model for Iranian Beef Industry

A. Nikoukar[1] - S.S. Hosseini[2]* – A. Dourandish[3]

Abstract

Price transmission in different levels of market has some effects on producers and dealers' income and welfare and consumers' expenditure and welfare. For this reason, analysis of agricultural commodities prices is important both in economical and political aspects. Existence of asymmetrical price transmission will incur increasing in marketing margin and will have profit for marketing factors, also will decrease producers and consumers' surplus. For the reason that beef provide society nutrition and there are too many producers in this sector, this article conducted with the aim of considering to kind of price transmission in Iranian Beef Industry. In this study, using monthly data for farm, slaughter-house and retail prices for beef during 1998-2005 and error correction model, price transmission model is estimated. Results show that price transmission in all beef marketing level in long run is symmetry and in short run from farm to slaughter-house and from farm to retail level is asymmetry. Elasticity of price transmission show that increase in farm price transmit to retail level with stronger effects. For asymmetry reason in beef market price transmission, consumers pay most expensive price from final price, and marketing factors will get profit for price fluctuation.

Key words: Price Transmission, Error correction model, Iran, Beef

1- Professor of Agricultural Economics Department, Tehran University
2- Assistance Professor of Agricultural Economics Department, Payame nour University of Khorasan Razavi
3- Assistance Professor of Agricultural Economics Department, Ferdowsi University of Mashhad
(* - Corresponding author Email: hosseini_Safdar@yaho.com)

Evaluation of Date Producers Support Policies in Development Economic Programs

S. S. Hosseini[1*] - S. Rezaei[2]

Abstract

Support per hectare from date producers during four Development Programs (1989-2006) is evaluated using OECD methodology. Results show that, considering real exchange rate, market price support average per hectare for first, Second and Fourth Programs are negative and equal to 39760259, 756853 and 2252143 Rials, respectively. Support in Third Program is 886878 Rials positive. According to the amount of budget payment per hectares, descending order of Programs would be like First, Fourth, Third and Second as their amount are 17287586, 3984724, 2212375 and 1982567 Rials, respectively. Therefore, successful Programs in market price support and budgetary payment are Third and Second, respectively.

Keywords: Producer support policy, Market price support, Budget payment, Date

1,2- Professor, and Msc Graduated Student, Respectively, Agriculture & Natural Resource Paradise of Tehran University., Daneshkade Ave., Karaj
(* - Corresponding author Email: hosseini_safdar@yahoo.com)

The Survey of Agricultural Research and Promotion Investment in Iran

H. Khaksar Astane[*1] - A. Karbassi[2]

Abstract

Agricultural research and promotion are factors of the same system that activity in different organizations framework and have common marginal goal. Therefore, The Joining between research and promotion is important. Both activities are very important, therefore the investment in one part should not have had effect in other part. Therefore, total Goal of this study, is consideration of Substitution or supplementary relation between investment in agricultural research and promotion. Therefore, The Productivity model was used; also, Total Factor Productivity was calculated with Tornquist – Theil indicator. Data was collective from different sources, during 1979-2004. The Results was shown one percent increasing in agricultural research investment, increases total factor productivity 0.080974 percent. Also 1 percent increase in promotion investment; increases total factor productivity 0.038398 percent. The variable of interaction between research and promotion has had significant with negative mark. To become negative this variable shows the both of these variable effect with total factor productivity and these are substitution, the reason is lack of research and promotion budgets in agricultural section.

Keywords: Total Factors Productivity- Research- Promotion- Tornquist-theil - Agricultural sector- Iran

1 -Member of Economical Research Group, Deportment of Iranian Academic Centre for Education, Culture and Research – Mashhad
(* - Corresponding author Email: hastaneh2002@yahoo.com)
2- Associate prof., Dept. of Agricultural Economics, University of Zabol

The Regression Analysis of Effective Factor on People Participation in Protecting, Revitalizing, Developing and Using Renewable Natural Resources From the View of Natural Resources Experts in Ilam Province

B. Arayesh[1*] - S.J. Farajollah Hoseini[2]

Abstract

The objective of this study was The regression analysis of effective factor on people participation in protecting, revitalizing, developing and using renewable natural resources in Ilam province .This study was a casual relative. Sample was taken from natural resource's experts and managers of Ilam province .56experts and managers were randomly Selected based on Cochrane formula as The subjects of The Study. Regarding research factors (objectives, problem,….)document analysis, library research and field study research, by using questionnaire were used in this Study .The main tool in this Study is questionnaire and its reliability and validity was tested based on experts opinion and a pilot study and its Alfa level was %88.Descriptive and inferential statistics were used and data was analyzed by SPSS 15.To test the hypothesis ,correlation, multiple regression, factor analysis were used. The result of inferential finding indicated that, There id a significant relationship between factors of social, political, cultural, economical. psychological and extension planning with people participation, and there isn't any significant relationship between natural resources extension content, and people participation .The result of regression analysis shows that only social –cultural factor from 7 factors of social, political, cultural, economical ,psychological agent abilities natural resources extension content, and extension planning had an effect on people participation

Keywords: People participation, Natural Resources extension, Public organization

1,2– PhD and Associate Prof, Islamic Azad University Ilam- Branch and Science and Research-Tehran branch, Respectively
(* - Corresponding author Email: barayesh@yahoo.com)

Factors Influencing Wheat Producer's Willingness to Participate in Green Subsidy Program to Adopt and Use of Soil Conservation Practices (Case Study of Khorasan Razavi Province)

M. Ghorbani[*1] - M.R. Kohansal[2]

Abstract

This paper surveyed factors influencing farmers willingness to participate in green subsidy program for adopting and continuing on soil conservation practices using a cross sectional data of 175 rain-fed wheat producers of Khorasan Razavi province and logit model. Results showed that household's income, slope of land, required credit for soil conservation at farm level, farmers' awareness of effects of soil conservation and sloped cultivated land to total cultivated lands ratio have positive effect and soil conservation experience has negative effect on probability of farmers' participation in green subsidy program of soil conservation practices. Based on results, awareness about the effects of soil conservation, conducting the program towards small farmers through long-run repayment and gratuitous helps, initial targeting to lands with higher slope, attempt to increase farmers' revenue through supplementary activities so as create incentive for receiving soil conservation subsidy credit and serious attention to required credit for soil conservation at farm level suggested.

Keywords: Soil erosion, Extension services, Conservation policy, Logit model

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1 ,2 – Associate professors of Agricultural Economics. College, of Agriculture, Ferdowsi University of Mashhad
(* - Corresponding author Email: ghorbani@um.ac.ir)

Factors Affecting Adoption of Agricultural Crops Insurance
Case Study: Apple Growers in Semirom and Eghlid

N. Tabaeian[1]* - A. Ajili[2]

Abstract

The purpose of this paper is to investigate the factors affecting adoption of agricultural crops insurance among apple growers in Semirom and Eghlid Shahrestans and determining the best model. A survey was conducted using the stratified random sampling. Data were collected by questionnaire from 240 adopters and 157 non – adopters. The results showed that adopters of insurance are more risk taking and also the adopters have more favorable worldview toward bank apparent steem. They have better awareness toward insurance and bigger gardens. Other results is redolent that Multiplicity model is the best model to distinct adopters and non adopters of agricultural insurance.The most important suggestion is application of multiplicity model and to recognition factors by agricultural crops insurance planners. Policy makers should pay attention to factors affecting adoption of insurance including diffusion, economic, institution and environmental factors.

Keywords: Adoption, Insurance, Apple growers, Diffusion model, Economic constraint model, Multiplicity model

1 ,2- MSc Degree and Assistant prof., University of Agricultural and Natural Recorses, Ramin – Ahvaz, Respectively
(* - Corresponding author Email: sadatt20@yahoo.com)

Factors Affecting Farmers ' Participation in Irrigation Management: the Application of Path Analysis

T. Azizi Khalkheili[1] - Gh.H. Zamani[2*]

Abstract

The main portion of water is consumed by agricultural section in the world. With regards to drought crisis, farmers' participation (FP) in irrigation management can play important role in increasing irrigation water productivity. Farmers' participation decreases public costs for building and maintaining irrigation networks, furthermore, increases their responsibility and ownership feeling towards protecting and use of irrigation networks. This research was conducted to determinate the factors affecting FP in irrigation management by use of path analysis technique on Doroodzan Dam Irrigation Network in Fars province, Iran. Descriptive research method with survey technique, for collecting data, was applied. Multi-stage stratified random sampling was used to select 270 farmers as the research subjects. The research findings showed that farmers' attitude towards participation and problem perception had the greatest direct affect on FP in irrigation management. Farmers' sociability and attitude towards personnel of Extension and Agricultural Service Centers had the greatest indirect affect on FP in irrigation management, and showed the greatest direct affect on farmers' attitude in this regards. Based on the research findings, applicable recommendations were made such as: inducing positive attitude toward participation as well as toward executive organizations by meaningful performance and offering feedback of activities to the farmers; and also increasing their perception toward problems through delivering training sessions and direct contacts.

Keywords: Farmers' participation, Irrigation management, Doroodzan Dam, Irrigation efficiency

1,2- Ph.D Student of Agricultural Extension and Professor, Dept. of Agricultural Extension and Education, Shiraz University, Respectively
 (* - Corresponding author Email: ghh_zamani@yahoo.com)

Factors Motivating The Visitors' Willingness to Pay for Elgoli and Mashrouteh Park in Tabriz City: Application of Two Stages Heckman Approach

B. Haiati[1*] - M. Ehsani[2] – M. Ghahraman Zadeh[3] – H. Raheli[4] – M. Taghizadeh[5]

Abstract

Development of economic activities, population growth, people's daily increasing business, and improvement of life standards has caused to increase in the demand for natural environments and tourism. The scarcity of these resources and insufficiency of capital resources for the reviving and establishing of the proper recreational environment, have orientated the management of natural resources to appraise the resources and to use people's participation. This study determines factors motivating visitors' willingness to pay for Elgoli and Mashrouteh parks in Tabriz city. To this end, the contingent valuation method and two-stage Hekman approach are utilized. Also their willingness to pay to visit these parks is estimated. The required data gathered in summer 2008 through questionnaire and interviewing 261 visitors. The results revealed that monthly income, number of family members, sexuality, and degree of individual's satisfaction from social security status, and the number of times that they visit the park over one year, are the effective factors. Moreover, the variables of duration each visit, monthly income, education and age of the visitors is identified as effective variables on the individual's willingness to pay. The results showed that average of the willingness to pay is 2231 Rls for per visitor. Based on the results, the most effective variable is the satisfaction of social security. Therefore increasing the social security condition can be highly influence the attractive of these parks.

Keywords: Two stages Heckman approach, Contingent valuation method, Willingness to Pay, Elgoli Park, Mashrouteh Park, Tabriz

1,2,3,4,5- Assistant Professor, MSc Students, Assistant Professor, Assistant Professor, former student, Department of Agricultural Economics, University of Tabriz, Iran, Respectively
(* - corresponding author Email: b_hayati@tabrizu.ac.ir)

Analysis of Pistachio's Comparative Advantages and Global Export Market Structure

Gh. Dashti[1]* - M. khodaverdizadeh[2] – R. Mohammad Rezie[3]

Abstract

Non-petroleum export expansion and export revenues diversification are some vital steps to reduce Iran's development goals injuries. As for the importance of Iranian pistachios in its non-petroleum exports, the present study determines the comparative advantages and the global exports market structure of pistachios for 2002-2006. To calculate the comparative advantages of pistachios exporting countries, two indices, i.e., the Revealed Comparative Advantages (RCA) and the Revealed Symmetric Comparative Advantage were worked out. To find out the global exports market structure of pistachio the Herfindahl and Concentration ratio indices were worked out. The Results exposed that among pistachio's exporting countries Luxembourg, USA, Syria, Netherlands, Cyprus, Slovakia, Greece and Jordan had comparative advantages. This shows an existing wide gap of Iranian comparative advantages indices as compared with that of others. Besides of that, the Iran's comparative advantage in pistachio export was declining through the period. As regards with concentration, Iran was the dominant firm in global markets and owed 60 percent of market share, but its export prices were not desirable. To reinforce and stabilize the (RCA) of Iranian pistachios, more export differentiation policies and dwindling of market concentration based on a few external markets are recommended.

Keywords: Comparative Advantage, Export, Market Structure, Pistachio

1 ,3 – Assistant prof., and Associate prof., College of Agriculture University of Tabriz, Respectively
(* - Corresponding author Email: ghdashti@yahoo.com)
2- PhD Student, Tabriat Modares University

Investigating Credit Constraint and Its Impact on Decrease in Rice Production in the Northern Provinces of Iran: Application of Indirect Production Function

H. Salami[1]* – H. Rafiee [2]

Abstract

This study investigates the presence of financial constraint and its possible effect on the level of rice production in Gilan and Mazandaran provinces. To this end, an Indirect Production Function was estimated using 2007 crop year production data. Results support the claim that shortage of financial resources is a limiting factor in all cities in these two provinces such that the available financial resources in Gilan and Mazandaran is 23.01 percent and 21.04 percent, respectively, less than the amount required to finance optimum level of production. This limitation has resulted in a 24.78 percent and 23.22 percent decline in production, respectively in Gilan and Mazandaran, as compared to a non-constraint situation. Given the share of these two provinces in providing the rice product needed in the country, supplying sufficient level of financial resources can play a considerable role in reducing import of this product.

Keywords: Indirect Production Function, Rice,Credits, , Gilan, Mazandaran

1,2- Professor and Ph.D. Student, Respectively, Department of Agricultural Economics, Faculty of Economic and Agricultural Development, University of Tehran
(* - Corresponding author Email: hsalami@ut.ac.ir)

Estimating Economic Value of Water in Production Function Method, Applying Classic and Entropy Approaches (Case Study: Wheat in Mashhad)

N. Khajeh Roshanaei[1] - M. Daneshvar Kakhki[2*] - Gh. R. Mohtashami [3]

Abstract
Reform of pricing system based on economic value of water in agricultural sector is one of the most efficient tools of demand management, which led to arrangement of water consumption model. It is hoped that demand of water and its waste decrease by reforming water tariffs in agricultural sector; and ground of saving for water is prepared. Current paper in this direction, for defining economic value of agricultural water applied production function method in wheat in Mashhad. In this method, Classic and General Maximization Entropy approaches are applied for estimating coefficients of production function. Results showed that Entropy approach wasn't able to estimate accurately coefficients of functions and it couldn't use its results for obtaining economic value of water. Whereas, in classic approach, Translog among different forms of functions was selected, as the best function form in wheat crop, and the economic value of water was calculated in 1870 Rials.

Keywords: Economic value of water, Classic approach, General Maximization Entropy, Wheat, Mashhad

1,2- MSc student Agricultural Economics and Associate professor of Agricultural Economics, Ferdowsi University of Mashhad, respectively
(* - Corresponding author Email : daneshvar@um.ac.ir)
3-Associate professor, School of Mathematical Sciences- Ferdowsi University of Mashhad

Leasing Sale Planning in Firms of Agricultural Machinery Technology Production (Case Study of Khorasan Razavi Province)

S. Abed[1] – M. Ghorbani[2*] - H. Liaghati[3] – M.H. Aghakhani[4] – M.R. Kohansal[5]

Abstract

In this paper using a cross sectional data of 210 selected farmers of Khorasan Razavi province in 2009 by stratified random sampling method tried to provide a practical framework to firms of agricultural machinery technology production so that using it's plan for sale leasing to answer the actual needs and lack of agricultural exploitation. Results showed that in high-price technologies group, tractor has first priority and the next priority is for combine. In technology groups of medium-price, broadcast seeder and chopper have first and second priority, respectively. In low price technology groups, plow, disk and subsoiler are in first to third ranks, respectively. In three technologies set, tractor allocated the highest demand and then its implement instruments have the highest demand. Therefore, in planning sale leasing, tractor and its mounted implement instruments, broadcast seeder, chopper and combine should be in the initial targeting and other applications considered in the next targeting. On the other hands, public and private machinery sector must focused on sale planning to fast delivery of agricultural machinery technology demand, interest rate lower than 10 percent, individual bonds, the domestic production technology and annual repayment installments. Subsidy participation of government in relation with interest rate premium requested for leasing companies and agricultural exploiters can help to process formation of this industry in agriculture sector and ultimately effective demand of farmers for these technologies.

Keywords: Leasing, Mechanization, Agricultural machinery, Subsidy

1 ,2,5- Former Graduate Student, Associate prof., and Associate prof. Respectively, Dept. of Agricultural Economics, College of Agriculture, Ferdowsi University of Mashhad
(* - Corresponding author Email: ghorbani@um.ac.ir)
3- Assistant Prof., Enviromental Science Institute of Shhid Beheshti University
4- Assistant Prof., of Agricultural Machinery, College of Agriculture, Ferdowsi University of Mashhad.