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ABSTRACTS

Testing aggregation over wheat producers in Iran: a mean scaling hypothesis approach

H. Salami and M. Tahami Pour[*]

This study investigates consistency in aggregation of wheat production in Iran's provinces using data over period 1983-2007 to answer the question of whether one can aggregate all provinces with respect to wheat production and apply a unique economic policy to wheat production in all provinces. To this end, the Mean Scaling Hypothesis (MSH), developed by Coyle based on the Generalized Composite Commodity Theorem, was used as a basis for testing the aggregation consistency. Results indicate that only 10 provinces can be consistently aggregated, implying that an aggregate production function can only be defined for these 10 provinces and a unique policy be formulated just for these provinces. Therefore, aggregation of all provinces is not supported by the MSH. Such aggregation will result in an aggregation bias and consequently, to inappropriate policy decisions.

JEL Classification: C100, D200

Keywords: Aggregation over provinces, mean scaling hypothesis, wheat production, Iran

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A Study on the effective factors on capital productivity in sub-agricultural sectors of Iran

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Because of the increasing limitations of production factors, productivity improvement is known as an effective method for obtaining production growth. So, in this paper, we applied GAP method for calculating average capital productivity during 1959-2006 in sub-agricultural sectors, and Panel Data method for determining effective factors on capital productivity. Results showed that the amount of labor used for each unit of capital and human capital have positive effects on capital productivity in sub-agricultural sectors of Iran. Results also showed that fishery and forestry sectors have had maximum capital productivity during this period. So, with respect to the result that, human capital for each unit has a positive effect on capital productivity, it is suggested that using specialist labor will help efficient use of production techniques.

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Determination of drought risk management priorities in agricultural sector of Gonbad-e-Kavous district using AHP technique

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With occurrence of recent droughts in Gonbad-e-Kavous district, it is considerable to regard preventive measures (drought risk management) that can mitigate drought effects. This study follows measures of drought risk management that mitigate droughts losses in short-run and long-run and minimize the farmers' getting shocked. After recognition and classification of measures of drought risk management, the Analytical Hierarchy Process (AHP) technique was applied to ranking measures. The questionnaires including binary comparison of measures were complemented by experts of executive, research and training departments in Jihad-e-Agriculture of Gonbad-e-Kavous County, regional water authority and agricultural research center of Golestan province and also few experienced farmers of Gonbad district in 2009. The AHP results from Expert Choice software showed that among farming measures, introducing species resistant to drought and salinity; among technical irrigation solutions, using the pressurized irrigation systems; in the legal group, drought insurance and allocating credits; and finally among the institutional measures, establishment of drought monitoring and prediction system in a national or regional level and training farmers are enjoyed higher priority in drought risk management. Therefore, it is necessary for regional planners and policymakers to make their decisions on the basis of the above-mentioned priorities.

JEL Classification: D81, Q54

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Simulation of food security based on changing production resources and trade policies

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Food security means access to all people, a society consistently at all times to enough food for an active and healthy life. Climate change and demographic conditions in addition to prevailing along the world has caused the irritability that food security in developing plans and visions of the country considered. In this regard, the study of food security in the next ten years (2009-2019) based on changes in resource production and trade policies (import) are predicted. Production and import demand functions of plant products were estimated applying time series data of 1981-2008 and the status of different groups' access to the materials and energy estimate food consumption was assessed in the future. The result showed that per capita food production and supply to the base year will be reduced if the production resources to be used are in undesirable status. But appropriate and optimal use of resources makes the production of agricultural sector in the future alone and without the need to import food security community. Furthermore, the distributions of food and energy situation have not been appropriate and the first to fifth deciles of income groups, consume food and energy less than that of the national average, while the share of eighth to tenth deciles exceeds the country's average level.

JEL Classification: I12, L11, O13, Q17, Q18

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Forecasting the growth rate of Iranian agricultural sector (a comparison of univariate and multivariate methods)

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The policy makers and economic strategists are trying to model the factors affecting the agricultural sector growth and to use them in the growth forecasting process. Today forecasting is regarded as an important instrument for economic policymakers. There are different methods used to forecast the economic variables. In this paper, the growth rate of Iranian agricultural sector is forecasted and the forecasting accuracies of univariate and multivariate methods are compared. The methods used in this paper include single exponential smoothing with trend, double exponential smoothing with trend, Holt-Winters additive algorithm, Holt-Winters multiplicative algorithm, auto-regressive integrated moving average process, vector auto-regressive approach and artificial neural networks. For univariate models, it was found that the artificial neural networks model, single exponential smoothing with trend and double exponential with trend have marginally better forecasting performance than those of the other methods in this group. Furthermore, for multivariate models the artificial neural networks forecast is more accurate than vector auto-regressive model.

JEL Classification: C52, C53

Keywords: agricultural sector, forecasting, growth rate

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Investigation of structural and functional factors affecting agricultural insurance satisfaction: a case study on Khorasan Razavi province

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The main objective of this study was investigation of structural and functional factors affecting agricultural policyholder's satisfaction in Khorasan Razavi province. The data and information are obtained from 1023 questionnaires completed by policyholders (503 samples of agrarian policyholder, 250 samples of orchard policyholder's 270 samples of bestial policyholders) in 2009. The findings of discriminate analysis in three groups of policyholders show that group variables of services in time and information variables had highest positive effects on the functional variables and highest negative effects on structural variables including laws and regulations of policyholder satisfaction. Also compensation variables with positive effect on agricultural policyholder and premium level with negative effect on bestial policyholder had high effects on satisfaction of products insurance. Some suggestions can be presented for improvement of insurance activities and finally increasing policyholder satisfaction, are providing proper information about bureaucracy, rules and simplifying the rules.

JEL Classification: G22, I39, C49

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Codification of advertisement strategies in coherence with the export of pistachio in Kerman province by SWOT model

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The main objectives of this study is determining the most important advertisement strengths, weaknesses, opportunities and threats of Kerman pistachio export and proposing appropriate strategies. At first, according to the evaluations done on interior and exterior environment of exporting pistachio advertisement of Kerman province, a list of strong and weak points, opportunities and threats was observed. After doing a survey by means of questionnaire from authorities (pistachio exporters of Kerman province), the *t*-test was applied to confirm or deny strong and weak points, opportunities and threats. Then, priorities were clarified by weighing each of the confirmed above mentioned factors through Likret spectrum and estimating the total weights, average weights and finally approximate weight. Eventually appropriate strategies were submitted to eliminate or to lessen the weak points, threats and improve and strengthen the strong points and available advertisement opportunities in accordance with Kerman province pistachio export, using SWOT analytical method.

JEL Classification: M37

Keywords: strengths, weaknesses, opportunities, threats, pistachio

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Marketing margins in warm-water cultured fish of Mazandaran province

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Aquaculture is one of the productive activities that can have major roles in increasing production and consumption of fish. The important role of effective marketing in aquaculture is to give enough choice for both producers and consumers from its early start. This research investigates the marketing situation of cultured fish in Mazandaran province and determines marketing margin and effective factors. Results revealed that total marketing margins for common carp, silver carp, grass carp and bighead fish are 10199, 6078, 12371, and 4387 Rials per kilogram respectively and also in all types of fish, the retailing margins are higher than those of the wholesaling margins. The marketing cost coefficients for carp, silver carp, grass carp and bighead are 7.74, 5.81, 12.87, and 11.75 percent respectively. The average marketing inefficiency rates for carp, silver carp, grass carp and bighead are 31.34, 46.62, 25.2, and 62.55% respectively. The estimated marketing margins function for warm-water fish shows high and direct effect of the retail prices and the values of procured products for sale and wholesale prices, marketing costs and the quantity of total production of the farms are also directly affected in marketing margins. This is so due to the nature of price determination in sailors' fish markets where it depends on the supply and demand in selling times. Planning of some effective policies for controlling the supply and demand is suggested.

JEL Classification: M31, M39

Keywords: marketing, warm-water cultured fish farms, Mazandarn province

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Investigating comparative advantage and supporting policies of pomegranate in Fars, Iran

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Production of any commodity should be profitable not only for producers but also for the country as a whole. In other words, production cost of a commodity should be less than income earned from its export or cost of import of that commodity. If these conditions fulfilled, one can say that the country enjoys social profitability and comparative advantage in production of commodity under consideration. As Iran has production and export potential in horticulture products, planning for production and export of these commodities are very important. This study used Policy Analyses Matrix (PAM) and Domestic Resource Cost (DRC) for calculating the comparative advantage of pomegranate in Fars province and PAM indices were used in order to investigate supporting policies. Amount of DRC index for pomegranate is 0.42 that demonstrates a strong comparative advantage for this product. Nominal Protection Coefficient (NPC) index is 0.49 that indicates domestic policies have reduced farmer's income to the level which is less than international prices. Furthermore, these policies are against production of this commodity and government receives implicit tax from producers. Nominal Protection Coefficient of Input (NPCI) index shows the effect of government policies on input prices. This index is 0.44 for Fars pomegranate that shows government pay input subsidy to the farmers. Effective Protection Coefficient (EPC) index is an index which shows the outcome of government policies regarding both input used by the farmers and farmers' income. This index is 0.49 for Fars pomegranate that indicates government does not support this product as far as input used by the farmers and their income is concerned.

JEL Classification: Q17, Q18, F14

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Investigation comparative advantage of sugar beet in Kermanshah province

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Sugar is important from the point of both energy source and food security for Iranian householders. The considerable part of internal consumption is imported. Sugar beet is one of the most important sources of sugar, as a raw material in the world and also in Iran. For food security and self sufficiency programs, considering comparative advantages of sugar beet cultivation is one of the most important aspects of economic planning and economic incentives of producers is important for the goals of government planning. In this study, sugar beet comparative advantage was determined by applying Domestic Resource Cost (DRC) and Social Benefit Cost ratio (SCB) criteria to data of 2004-05 farming year with two levels of exchange rates in Kermanshah provinces. The protective policies of the government were analyzed by Matrix Analysis of Policy (MAP). Based on findings of this study, Kermanshah has high comparative advantage on this crop under competitive and real price condition, but under existing condition producer receive negatives economic incentives and pay implicit tax to government.

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