Is There a Consensus among Agricultural Economist?

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Abstract

The paper investigates the consensus among Hungarian agricultural economists on specific propositions on the basis of a 2004 survey using a consensus index. In comparison to previous studies of agricultural economists much more diverse found among agricultural economists. In contrast to earlier studies, we have no found evidence of a difference between positive and normative propositions. The results suggest that personal characteristics of agricultural economists, like age, occupation, educational background may have influence on the pattern of responses. We also found some support to the role of positive and normative influences on policy judgement.

1. Introduction

It is widely believe that economists disagree seriously on economic policy. However, is the popular image justified? Last decades this presumed disagreement was investigated by several studies. The initial survey of economists in United States (Kearl et al. 1979) examined the general degree of consensus within profession on selected issues and topics. Their research was extended and updated by Alston, Kearl and Vaughan (1992) and Fuller and Geide Stevenson (2003). Similar studies were carried out to measure the consensus and dissension among economists in the United Kingdom (Ricketts and Shoesmith, 1992) and European countries (Frey et al. 1983, 1984). One of the main finding of these studies is that consensus is usually stronger for positive than for normative propositions. The survey technique has also been extended to explore opinions within fields of economics. For example Fuchs et al. (1998) investigated the views of labour and public economists, Whaples (1995) surveyed economic historians, and Alston and Vaughan (1993) analysed the opinion of institutional economists.

The agricultural policy issues are also hotly debated by both public opinion and academic circles. The consensus among agricultural economists was investigated in European countries (Herrmann et al. 1985) and in the United States (Pope and Hallam 1986). These studies found a significant disagreement among agricultural economists in both normative and positive statements. Recently there is no agreement in evaluation of success and failure of reform in transition countries' agriculture among agricultural economists (Rozelle and Swinnen 2004). It is reasonable assume that diverging opinion may arise from differences in some basic positive and normative propositions. Therefore the paper attempts to identify the degree of this dissension and explain it with demographic characteristics of respondents.

The purpose of the study is to analyse consensus among agricultural economist in Hungary and to compare our results to earlier papers. Our contributions are threefold. First, this survey is a pioneering research after twenty years in the field of agricultural economics; furthermore economists' opinion has not been investigated in a transition country before. Second, contrary to previous studies, a new methodology, a consensus index, is adopted instead employing of a particular measure of consensus (e.g. relative entropy or standard deviation). Third, this paper also investigates how far attitudes to policy are affected by positive predictions.

Our sample, which was on the basis of a random sample of members of Association of Hungarian Agricultural Science, includes a subset of Herrmann at el. for European Association of Agricultural Economics (EAAE) and Pope and Hallam propositions for American Agricultural Economics Association (AAEA). While great care has been given to translating the original English propositions into Hungarian, it cannot be excluded that they are not understood in the same way in Hungary for purely linguistic reasons. Another possible bias may be due to the fact that the survey was conducted 20 years later.

The paper is organised as follows. Section 2 describes the sample and the measures of consensus. The degree of consensus is analysed in section 3. Section 4 inquires the influence of personal characteristics on the views of agricultural economists. The role of science and values in policy

judgement is discussed in section 5 and the comparison to earlier studies is reported in section 6. A summary and conclusions are presented in section 7.

2. Survey, sample, and measures of consensus

For the present study, a two-page questionnaire of 31 propositions was mailed in September 2003 to a random sample of 200 agricultural economists taken from Association of Hungarian Agricultural Science membership roster. Of the 31 propositions, 15 were taken directly from Herrmann et al. (1985) survey and 16 from Pope and Hallam (1986) survey. The set of questions were classified into (a) positive, (b) normative, and (c) method-oriented or professional categories. Following earlier studies, the response patterns are indicated on the Likert scale, ranging in equal intervals from 1 (I agree strongly) to 5 (I disagree strongly). The response rate was 58 per cent. About 54 per cent of our respondents were currently employed in academia, and 26 per cent worked for the government, and 20 per cent were employed in the private sector.

Following Fuller and Geide-Stevenson (2003), a consensus index was applied for each propositions based on three different measures of consensus. The first element of consensus index is the relative entropy index ε, which are the most popular measures in surveys mentioned above. This index was derived from information theory, and ranged from 0 (perfect consensus) to 1 (no consensus)[1]. The relative entropy index does not indicate the direction of consensus, but merely the degree of consensus. Furthermore, as Fuller, Alston and Vaughan (1995) point out, the relative entropy is nonlinear, therefore large changes in distribution of response result yield small changes in entropy; consequently interpreting index is a matter of judgement. In this paper, after Fuller and Geide-Stevenson (2003), if a relative entropy value is less than or equal to 0.8 indicates a consensus. The second measure of consensus is based on a chi square-test of uniform a distribution. This essentially equivalent to the null hypothesis of $\varepsilon=1$. If, for a particular proposition, the null hypothesis can be rejected at the 0.10 Type I error level, the one concluded the test indicated consensus. The relative entropy index does not indicate the direction of consensus, but merely the degree of consensus. Therefore, third element of consensus index is the relative weight opinion, which reflects to the direction of consensus (Ricketts and Shoesmith, 1992). To calculated the average weight opinion, "agree strongly" responses are scored +2; agree with reservations," +1; neither agree nor disagree," 0; generally disagree," -1; "disagree strongly," –2. This measure is based on the supposition that reasonably similar views or broad agreement were likely among those who generally agreed and those who agreed with provisos. If the value of relative weight opinion is larger than zero, we conclude a broad agreement or consensus. The consensus index was constructed on the conclusions of each of three measures. If all three measures indicated consensus, we conclude strong consensus. We reported two affirmative measures of consensus as substantial consensus, whereas one affirmative measure is reported as modest consensus.

3. The degree of consensus

All propositions from the survey are listed in Table 1, with the consensus index and its three elements. The first ten propositions deal with positive statements, propositions 11-26 address agricultural policy issues, and last five propositions deal with the status of agricultural economics. For 2 of our 31 propositions, we concluded strong consensus. For 9 propositions, we found substantial consensus and for 12 propositions, we found modest consensus. A conclusion of no evidence of consensus was found 8 of 31 propositions in our survey. The share of propositions with no consensus and modest consensus responses is above 64 per cent in total questions. Therefore, we may conclude that there is a considerable disagreement among Hungarian agricultural economists.

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[1] Relative entropy ε, is defined as observed entropy divided by the maximum possible entropy for the number of possible outcomes where entropy is the sum of the probability of a particular outcome multiplied by the log (base 2) of the probability, that is $(-p_i \log_2 p_i)$.

Table 1 Measures of Consensus

Propositions	Relative entropy	Chi square test	Relative weight opinion	Consensus
1. Characterising farms as small businesses, the markets they face are more concentrated than those faced by other small businesses.	0.92	0.1497	0.22	substantial
2. Barriers to entry and exit in agricultural industries are sufficiently low that the markets can be characterised by what some economists have called contestable (approaching a competitive allocation of resources).	0.92	0.0785	-0.17	no
3. Agricultural market prices are close to a competitive market equilibrium	0.91	0.0343	-0.61	no
4. Resource adjustments in agriculture are "sticky" compared to other sectors of economy due to asset fixity.	0.86	0.0726	0.86	modest
5. In agricultural markets, price reduction induce an increased supply in the short run.	0.97	0.0000	-0.28	no
6. The dispersion in agricultural incomes can be explained primarily by different managerial skills of farmers.	0.92	0.0215	-0.47	no
7. The specialisation of agricultural production is harmful in the long run. as it reduces soil fertility.	0.97	0.0000	0.19	modest
8. Profit maximisation is the farmers' main objective	0.87	0.4740	0.61	substantial
9. Risk is of greater importance for farmers than entrepreneurs in other sectors.	0.75	0.7517	1.18	strong
10. Family farms are superior to other organisational forms with respect to efficiency of agricultural production	0.92	0.0630	-0.47	no
11 Special public policies regarding the financing of agricultural investment are necessary because wholly private financial markets are imperfect.	0.82	0.9872	0.94	substantial
12. Generally, externalities associated with agricultural production do not lead to distortions which are of sufficient magnitude to warrant government interventions.	0.81	0.5247	-0.87	modest
13. Larger farms should receive proportionally lower subsidies than small farms.	0.97	4E-06	-0.17	no
14. Because of market failure in the provision of information. agricultural economic extension efforts are socially productive and should be funded.	0.70	0.3828	1.30	strong
15. Social welfare is improved through the provision and enforcement of antitrust laws.	0.92	0.0885	0.22	modest
16. Government-supported activities such as the Extension Service should be more fully directed toward small-scale agriculture.	0.66	6E-06	1.51	substantial
17. The government should pursue policies aimed at equalising the distribution of income	0.96	0.0014	-0.03	no

and wealth within the agricultural sector.				
18. Free trade policies should be pursued by the government.	0.90	0.2039	0.23	substantial
19. Laissez-faire is preferred to government intervention in agriculture.	0.88	0.4394	-0.14	modest
20. Society should not discourage farm growth.	0.89	0.0384	0.78	modest
21. The characteristics of the agricultural sector justify governmental redistribution measures in favour of the farmers	0.84	0.5126	0.17	substantial
22. Price fluctuations in agricultural markets should be smoothed by policy measures.	0.86	0.0739	0.77	modest
23. Agricultural price policy is an appropriate instrument of income policy.	0.97	0.0004	0.13	modest
24. Disparity in per capita income between agriculture and other sectors can be reduced in the long run by agricultural supports.	0.99	1E-06	0.08	modest
25 As long as there is unemployment in the economy, the opportunity costs of labour are zero and agricultural policy should maintain agricultural labour force within sector.	0.94	0.0001	0.60	modest
26. Agricultural policy should aim to maintaining the number of family farms.	0.93	0.0474	0.06	modest
27. Agricultural economics should be primarily a social, rather than a managerial science.	0.90	0.2139	-0.10	modest
28. The representation of the real world in agricultural economics research (as indicated by the journals) by emphasising technical elegance is not very useful for understanding agricultural economic behaviour.	0.85	0.6499	0.02	substantial
29. Economists should analyse the impacts of agricultural measures, but not problems of their practical implementation and of decision-making process.	0.91	0.0155	-0.66	no
30. Recommendations of agricultural economists have little influence on agricultural policy.	0.82	0.6457	0.83	substantial
31. Too much stress is laid on the use of mathematical models in teaching and research in the field of agricultural economics.	0.88	0.7879	-0.33	modest

There was strong consensus with propositions that risk is greater of importance for farmers than in other sectors (9), and that agricultural economic extension is socially productive and should be funded (14). Interestingly, the conclusions of strong disagreement were comparatively concentrated in the area of positive propositions: the responses to five of eight propositions with no consensus deal with positive statements. Specifically, there was strong disagreement propositions that agricultural markets can be characterised by contestable market (2), that agricultural market price is close to equilibrium (3), that there is inverse supply curve (5), that dispersion in farm incomes can be explained by different skills of farmers (6), and that the family farm is superior to other organisational forms (10). There was also strong disagreement with two policy propositions, that larger farms should receive proportionally less support than small farms (13), and that government should equalise income and wealth within agriculture (17). Finally, there was no consensus with propositions that economists should analyse the impacts of agricultural policy, but not problems of their implementation and decision-making process (29). We found substantial consensus for 2 of 5 agricultural economics profession propositions, namely that the representation of real world in agricultural economics is not very useful for understanding economic behaviour (28), and that recommendations of agricultural economics have little influence on agricultural policy (30).

If we record the rank of each propositions, as measured by its relative entropy or weight opinion under the heading positive and normative, we found very similar results. Employing Spearman rank correlation coefficients to test whether ranking based on various measures of consensus are different or not, we found very strong correlation between two indices. It indicates that our results are not sensitive for different measures of consensus. Did a difference in the extent of consensus appear when we compared positive and normative propositions? Mann-Whitney test was applied to check whether entropy or relative weight opinion is distributed similarly in positive as in normative propositions. Results suggest that we can not reject at the 10 per cent level of significance the null hypothesis of the same distribution of consensus measures in normative and positive propositions.

4. The influence of personal characteristics

The inquiry collected information on the following characteristics. Occupation; a distinction was made between academics job and Ph.D. student, agricultural economists employed in the public sector (non-academics) and agricultural economist working in the private sector. Respondents are divided into following groups by age; young (up to 34 years), middle (between 35-54 years) and higher (above 55 years). Pope and Hallam (1986) emphasise the role of school graduate training in determining general economic philosophy. More specifically, in Hungary one can get an agricultural economics degree via agricultural universities and economics universities. Agricultural universities have emphasised the microeconomic component of agricultural economics, whilst economics universities have focused rather the macroeconomic view on agriculture. Therefore it is reasonable assume that different education background may affect on the view of agricultural economists. In addition, we also test the effect of having a Ph.D. or not on the pattern of response.

The influence of personal characteristics on the views of agricultural economists is investigated in two steps. First, is based upon simple two-way cross tabulations and the chi-squared goodness of fit statistic. A statistically significant result from this statistic indicates that two variables defining cross-tabulations are not independent of each other. Second, we attempt to take account of the simultaneous influence of several demographic factors. The dependent variable is only adopting discrete values (taking response scored from 1 to 5), thus the ordered logit analysis has been applied.

4.1. The influence of age

Table 2 shows that fifteen propositions were judged significantly different in various age classes. The nine of fifteen statements were influenced by younger age, while six propositions were by middle aged people, and only three questions were by higher aged respondents. Noteworthy is that younger agricultural economists opinion differ significantly from elder colleagues especially in normative questions. In general, the younger generation tend to more support to market oriented agricultural policy. They expressed more agreement with free trade policy (proposition 18) and the laissez-faire policy (proposition 19) than agricultural economists in general. Further, it is interesting that young agricultural economists have more sceptical views on the effects on antirust policy (proposition 15),

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and the possible income redistribution impacts of agricultural policy (proposition 24 and 25). They feel less that the characteristics of agriculture are justify governmental interventions (propositions 21) comparing to elder agricultural economists. This confirms to our a priori expectations, namely younger people who are living their life less under socialism tend to be market oriented and less favour for protectionism. However, younger agricultural economists were more favourable to some aspects of income redistribution (propositions 13 and 20), indicating more emphasis on the equity issues.

Table 2 The influence of age on the views of agricultural economists

Question	Age		
	Young	Middle	Higher
1	**		
3			*
6		*	
12		*	
13	***		
15	**		
17		*	
18	*		**
19	*		
20	*		
21	*	*	
24	**		
25	*		
27		*	
28		*	*

Note: significance levels are *=10 per cent, **=5 per cent, ***=1 per cent

The propositions 28, stating agricultural economics research is not very useful for understanding economic behaviour, is more rejected by middle and higher aged agricultural economists. Finally, middle aged agricultural economists proportionally agree more with the pro-social-science position of agricultural economics (propositions 27).

4.2 The influence of occupation

Table 3 reports that of the 31 propositions, 16 yield significantly different response by employment category in two-way cross tabulations. The opinion of private sector and academic agricultural economists differ significantly in the most cases, twelve and eight propositions respectively. We expected that respondents working in private sector to be more interventionist and less social oriented comparing to those employed in government or academics because of their daily proximity to agricultural problems. In general, private sector economists have significantly different views in both positive and normative propositions. The private sector agricultural economists expressed more agreement with agricultural policy interventions (propositions 23, 24 and 25) and their justifications (propositions 11 and 14). However, they agree less that larger farms should receive relatively lower supports than small farms (propositions 13). The respondents working in private sector tend to be stronger supporters for existence of special characteristics of agriculture (propositions 1, 2 5, and 6). Academics are less supportive for various aspects of governmental interventions (propositions 21-25). It is interesting that evaluation of proposition 23, price policy is an appropriate instrument of income policy, is significantly different each employment group. The academics economists and Ph.D. student tend to agree less, whilst government and private sector agricultural economists are more supportive with this proposition.

Table 3 The influence of occupation on the views of agricultural economists

Question	Occupation			
	Academics	Ph.D. student	Government	Private
1				***
2				**
3				***
5				**
6	***			***
7				**
8	**	*		
11				**
13				**
14				*
21	**			
22	**			
23	***	*	*	**
24	**			***
25	***		**	*
29			*	

Note: significance levels are *=10 per cent, **=5 per cent, ***=1 per cent

Our results indicate that employment matters, especially for academics and private sector job. These results seem broadly comparable with other studies. Kearl et al. (1979) find no microeconomic propositions that produced diverging responses by employment category in the sample of United States economists. Alston et al. (1992), who update Kearl et al (1979) study, reports three examples, where employment categories affect on responses. Ricketts and Schoesmith (1992) find that opinion varied by the employment of respondents, especially for macroeconomic issues. Pope and Hallam (1986) also find differences regarding to occupation. Their interesting results are that academics are quite interventionists on many issues with government employees being the less interventionists. However, it remains open question whether employment experience influences opinion or opinion affects choice of job.

4.3 The influence of education

We proceed to consider the hypothesis that those who graduated from an economics university are more market and social sciences oriented. This hypothesis seems reasonable in the light of differences in curriculum of graduate program. Table 4 shows that respondents graduating from an economics university have significantly different opinion according to both positive and normative propositions. They are less supportive of special characteristics of agriculture (propositions 4 and 9), but they agree more with the existence of negative externality in agriculture (propositions 7). Respondents with economics background disagree proportionately more with market characteristics suggesting government intervention (propositions 11) and income redistribution aspects of agricultural policy (propositions 16 and 20). They tend to more favour recent methodological approach employing in research and education (proposition 31) and they have more doubt about the impact of agricultural economist on policy recommendations (proposition 30). The respondents with agricultural background have usually opposite views. They are more supportive of agricultural speciality (propositions 8 and 9), and greater support for interventionist financial policies (proposition 11). However they less agree with a more equitable distribution of income and wealth (propositions 20). Surprisingly, Ph.D.'s are more interventionist in some aspects of agricultural policy than others. They agree more to statements emphasising positive effect of agricultural policy (propositions 22 and 23), and more supportive of maintaining family farm (proposition 26).

Table 4 The influence of education on the views of agricultural economists

Question	Economics	Agricultural	Ph.D.
3	*		*
4	*		
6			*
7	*	***	
8	**	**	
9	***	***	
11	***	**	
14			*
16	**	*	
20	**	*	
22			**
23			**
26			**
30	**		
31	*	*	

Note: significance levels are *=10 per cent, **=5 per cent, ***=1 per cent

4.4 The influence of personal characteristics together

Table 5 shows the results of ordered logit estimations for 18 of 31 propositions, where at least one variable has significant effect on a particular statement. In order to facilitate the reading of the table only those coefficients have been reproduced which exhibit a significant influence on the response. The results suggest that the general pattern of relationships fundamentally changed by this analysis as compared with the results based on simple two-way cross tabulations. First, striking difference is that of the 31 propositions, 28 are influenced by any personal characteristics separately comparing to 18 propositions for all characteristics employing ordered logit models. Second, there is considerable difference in significance of a particular variable depending on its role in a two-way cross tabulation or in an ordered logit model. For example, there is a significant relationship between respondents working in private sector and a particular proposition for twelve cases, corresponding number is only two for ordered logit models.

As far as the influence of the age variable is concerned, no systematic differences can be observed. This is somewhat surprising at the first glance, because our results based on cross-way tabulations show that younger agricultural economists are less favour to protectionism and more market oriented. However, it should be noted that there is only one common, which is significant statement in both cross tabulation and ordered logit model (proposition 24). Furthermore, there four-four propositions where the influence of young-middle and middle-higher age on the views are directly comparable. The results indicate that the coefficients of various age groups have the same sign on the responses.

The impact of occupational characteristics shows similar results, namely there is no difference in the pattern of responses, except proposition 13. Agricultural economists employed in academics and in the governmental sector agree with less that larger farms should receive relatively lower supports than small farms, whilst Ph.D. students are more supportive with this statement.

Finally, we examine what extent an educational background impinges upon the individual response. Of the six propositions, four are affected differently by various education backgrounds. Respondents graduating from an agricultural university are more supportive of the idea that the characteristics of agriculture justify governmental interventions (propositions 21), whilst agricultural economists having Ph.D. disagree more with this statement. Persons with economics background are more inclined to support recommendations of agricultural economists have little impact on agricultural policy (propositions 30), while Ph.D.'s are less agree with this.

Table 5 Determinants of responses

Question	Young	Middle	Higher	Academics	Ph.D. student	Government	Private	Economics	Agriculture	Ph.D.	McKelvey and Zavoina's R^2	Log-likelihood
1				0.92*	1.08*	1.58***					0.09	-151.48
3		1.67*	1.71*	0.94**			1.22**	1.64**	1.73**	1.70**	0.14	-148.46
5	0.65*			1.31***		1.14*		1.55**	1.14*		0.17	-155.37
6	0.69*	2.36*									0.10	-151.36
7		2.23*	3.52**				0.93*		1.00**	0.99**	0.249	-147.74
9	1.64***	0.94*							-1.47*		0.23	-112.25
11	1.48***								-1.41***		0.16	-127.17
13				-1.45***	1.50**	-1.44***					0.09	-162.09
17					-0.99*	-0.88**		0.85**			0.10	-159.60
21				1.63***					-0.76*	0.86*	0.18	-133.16
23	0.99**	0.94**		1.98***	1.70***						0.28	-149.95
24	1.63***	0.88*		1.58***					-1.25***		0.26	-152.66
25				2.57***						1.21***	0.25	-146.93
26		-0.82*	-0.98*			-0.76*		-1.79**		-1.23***	0.15	-146.69
27		-2.59**							-0.67*		0.11	-142.52
29		-1.08**	-1.23**		-1.38**	-0.93**					0.11	-145.45
30		2.32*	2.28*			0.75*		-0.92**		0.80*	0.19	-129.77
31	0.79*					-1.10***			-1.50***		0.16	-140.43

Note: significance levels are *=10 per cent, **=5 per cent, ***=1 per cent.

In short, analysis based on ordered logit model confirms that personal characteristics are matter for responses, although differently as cross tabulations suggested. Long and Freese (2003) argue that McKelvey and Zavoina's R^2 is most closely approximation the R^2 obtained by fitting the linear regression model on the underlying latent variable. Employing this measure of fit, our results suggest that a great deal of variability in responses remains unexplained.

5. The role of science in policy judgements

Friedman (1953) argued that policy difference can usually explained by differences in judgements about positive economics. But, a suitable test of this conjecture is not easy to frame. But, our survey has permitted some investigations of the role of positive and normative impacts on policy judgements. Following Ricketts and Schoesmith (1992), we take each policy propositions as a dependent variable in a multiple ordered logit regression; we employed as explanatory variables responses to the positive propositions (1-10). For each regression, the "best" subset of explanatory variables was selected using stepwise regression with backward elimination.

Table 6 provides a summary of the significant variables found to be related responses in six aspects of agricultural policy. Following classification by Hallam and Pope (1986) two of six propositions can be characterised by pro intervention (11, 22) and four are pro income (13, 17, 20 and 26). Consider a proposition 11, which recommends special policy for financing of agricultural investments. The more respondents see that farmers face are more concentrated markets than other firms (proposition 1), the more favourable they are to government interventions in financial markets. Furthermore, those who believe that agricultural markets can be described as a contestable market (proposition 2), and agriculture is characterised by asset fixity (proposition 4), they are more supportive for government policy. The negative sign on proposition 7 suggests that respondents who are more agree with disturbing effect of specialisation, they reject more the policy interventions.

Table 6 Response score for six policy propositions regressed on scores for positive propositions

	11	13	17	20	22	26
1	0.41**					-0.31*
2	0.32*					
3				-0.42**	-0.36**	
4	0.75***	-0.43***	0.33*	0.36*	0.53***	
5		-0.29*	0.30*		0.32**	0.43**
6			-0.27*	0.54***		
7	-0.34**			-0.57***		
8						
9			0.56***	-0.46**	0.35*	
10		0.48***		-0.49**		1.43***
McKelvey and Zavoina's R^2	0.36	0.17	0.21	0.34	0.22	0.44
Log-likelihood	-117.5	-156.2	-153.2	-130.5	-134.1	-130.4

Note: significance levels are *=10 per cent, **=5 per cent, ***=1 per cent.

The other pro intervention proposition (22) states that agricultural policy should smooth price fluctuation in agricultural markets. Our a priori expectations are confirmed by results. Respondents who believe that agricultural market prices close to equilibrium (proposition 3) they oppose policy intervention. The positive sign of variables relating to various specificity of agriculture, sticky resource adjustment (proposition 4), and inverse supply curve (proposition 5), above average risks in agriculture (proposition 9), indicates a more supportive view with government measures.

Different comments apply to the results for proposition 13 on more equalised subsidies within farm sector. The negative sign of propositions 4 and 5 imply that respondents accepting sticky resource adjustment in agriculture and inverse supply reaction in short run, they disagree with favourable distribution of support for smaller farms. Proposition 10 pick up attitudes of superiority of family farms is strongly associated with support for equitable distribution of agricultural subsidies.

Surprisingly, proposition 17, which is basically a generalisation of proposition 13, yields different results from some aspects. Namely, propositions 4 and 5 have a positive sign, indicate that those who agree with sticky resource adjustment in agriculture and inverse supply curve, they are more supportive for equalising of income and wealth within agriculture. Similarly, more respondents believe that risk is more important in agriculture than other sectors; they are more favourable to a more equitable agricultural policy.

An interesting question is 20, claiming that society should not discourage farm growth. Four variables (propositions 3, 7, 9, and 10) are negatively associated with support for discourage farm growth. Respondents who are unwilling to accept that agricultural market price close to equilibrium; negative externality of specialisation of agricultural production; risk play more important role in agriculture than other sectors, superiority of family farm, they are more supportive for farm growth. On the other hand, the more they see the resource adjustment is sticky in agriculture and the dispersion of agricultural income can be explained by managerial skills of farmers, they are to advocate farm growth.

Finally, proposition 26 states that agricultural policy should maintain family farms. Respondents who accept that farm is special small business comparing to small business in other sector (proposition 1), they disagree with support family farms. The positive effects of proposition 5 and 10 suggest that those who agree with inverse supply curve and superiority of family farm; they are more favourable of idea supporting family farms.

6. Comparison to earlier studies

Sixteen propositions in our survey were the same as in Pope and Hallam (1986) study and fifteen propositions were in Herrmann et al. (1985) paper, therefore they are directly comparable. Using 15 and 16 propositions common to published studies, no statistically correlation could be found between Hungary entropy ranking and those of AAEA and EAAE surveys. Obviously, propositions producing greatest disagreement are not the same in Hungary as elsewhere.
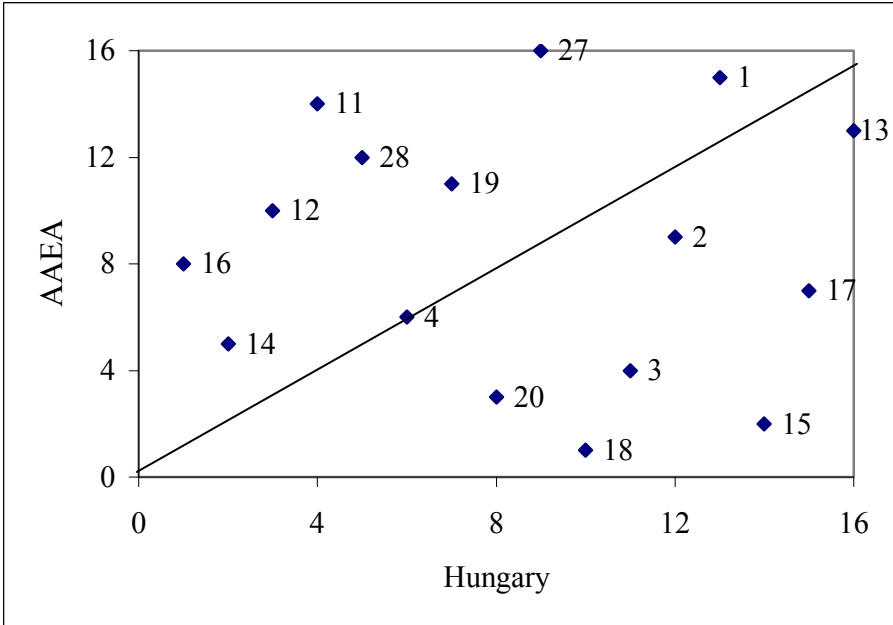

Figure 1 Comparison of 2004 Hungary and 1986 AAEA Relative Entropy Rankings
Note: The 16 common propositions are numbered according to this survey

Figure 1 plots the Hungarian 2004 entropy ranking against the 1986 AAEA ranking for the sixteen common propositions. The diagonal traces the path of perfect agreement between rankings. Two propositions appear toward opposite ends of the rankings. Proposition 11, "special financial policies are necessary for agricultural investments", produces disagreement in the United States but relative consensus in Hungary. Conversely, proposition 15, emphasising positive role of antitrust laws,

has low in United States and high entropy in Hungary. Deleting these propositions produces slightly growth in the rank correlation, but it still remains insignificant. It should be noted that propositions 11, 12, and 16 on market failures arguments for government intervention are strongly above the diagonal (higher in the support ranking in Hungary than in United States). Furthermore, similar observations can be applied for proposition 27 and 28 on various aspects of agricultural economics. On the other hand, propositions 15 (usefulness of antitrust policy) and 17 (income and wealth equalisation within agriculture) and 18 (free trade policy) are markedly below the diagonal (lower in the support for proposition ranking in Hungary than in United States). These results indicate that Hungarian agricultural economists are more favourable for government interventions, but they agree less their income distribution effects than in the United States. In addition, Hungarian agricultural economists think that agricultural economics is social science rather managerial science, and they are more sceptical against usefulness of mainstream agricultural economics than their colleagues in United States.
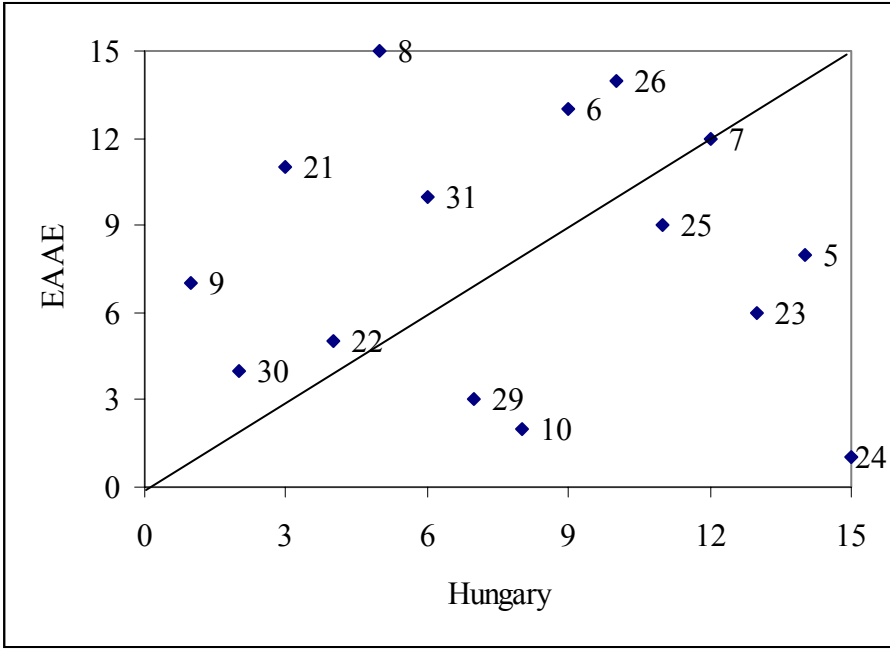

Figure 2 Comparison of 2004 Hungary and 1985 EAAE Relative Entropy Rankings
Note: The 16 common propositions are numbered according to this survey

Figure 2 shows the 2004 Hungary ranking against the EAAE ranking in 1985. The greatest discrepancy between rankings is for propositions 24 on the ability of agricultural policy to reduce disparity in per capita income between agriculture and other sectors. Noteworthy is that propositions 8 (on farmer's profit maximisation goal) and 21 (characteristics of agriculture can justify government intervention) are considerably above the diagonal (higher in the support ranking in Hungary than in EAAE survey), while propositions 23 (price policy is an appropriate measure) and 24 are markedly below it (lower in the support for proposition ranking in Hungary than in Europe). These results does not consistent with view that Hungarian agricultural economists are more sympathetic with income redistribution and government intervention than are European agricultural economists.

7. Conclusions

The general outcome of our analysis is that there exists a considerable dissension among Hungarian agricultural economists. Interestingly, the disagreement concentrated mainly on positive propositions, rather than policy questions. However, we found no evidence, using parametric and nonparametric statistical methods, of a difference in average relative entropy or weighted opinion between positive and normative statements. This contradicts to the results of earlier studies.

Personal characteristics such as age, occupation and educational background have been used to explain significant differences of opinions. Not surprisingly, the attitudes adopted towards the different propositions depend on the age of respondents. This is true particularly for normative questions, younger agricultural economists are more market oriented, but they are more favourable to some aspects of agricultural policy than their older colleagues. The respondent's occupation also has a significant influence: the academics including Ph.D. students are less interventionist compared with those of private sector employees. The educational background plays also important role in differences of opinion. Those graduating from an economics university tend to be less interventionist than others. Surprisingly, Ph.D.'s agree more with some aspects of government interventions.

Comparing our results with earlier studies we may conclude that Hungarian agricultural economists are more supportive for government interventions than in United States, but they less interventionist than in Western Europe.

Finally, we found that scientific convictions play a part in determining attributes to policy. However, measures of fit suggest that a considerable part of variability in attitudes to policy propositions remains unexplained. We should agree with conclusion by Rickett and Shoesmith (1992): "there is a possibility that these determine beliefs about empirical relationships rather than the other way around" (p. 214).

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