MACROECONOMIC ASPECTS OF THE PRICE AND THE SALARY IN DEVELOPMENT OF COMPETITIVE AND EXPORT-ORIENTED AGRICULTURE IN AZERBAIJAN

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Abstract

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The main role and significance of salary as stimulated factor in development of production of competitive and export oriented agricultural products and whole agrarian sector has been affirmed according to the strategic aim and goal of strategic road map about production and processing of agricultural products in Azerbaijan Republic in this article, comparative analysis of it has been conducted with other sectors of economics and factors, which have an effect on it, have been estimated. In this case after generalization, grouping, system approach, economic and econometric analysis, influence of gross output, intermediate consumption added value, labour cost, other production taxes, gross profit, consumption of main funds and net profit to average monthly nominal salary in separate sectors of economy has been valued and it has been identified dim connection level of salary with a lot of main macroeconomic indices. As a result it is noted the necessity to define average monthly nominal salary according to the role and share in real economy of each field for development of production of competitive and export oriented agricultural products and whole agrarian sector.

Besides it, as competition factor-mutual relation of producer price indices of agricultural product with salary is agenda as well. The article covers dependence of producer price indices of agricultural product on salary, salary fund, net weight of salary pay in expenses spent on production of agricultural product, establishment of production account and profit in agricultural sector, dynamics of net weight of share of agricultural sector in economics, level of average monthly nominal salary on economic activity types, place of separate sectors of economics on macroeconomic indices in economic activity types, models of dependence of average monthly nominal salary on main macroeconomic indices annually in economics and average monthly nominal salary in economics have been made up.

Key words: competitive; export oriented; agricultural products; price; average; monthly; nominal salary

Introduction

In order to reach strategic purposes such as, regional and sectoral development of agricultural products with competitive advantage, production means, simplification the access for producers of agricultural product to production means, information and recommendation service, internal and external markets, forming farmer's partnership in agriculture, forming competitive agricultural sector through developing of agribusiness and processing of agricultural products, increasing science and education quality in agrarian sector; increase of gross weight of necessary nourishment production substituted export in internal market, to set food storage and to strengthen nourishment safety; increasing relevant employment opportunities and to improve living standard of population, supplying social welfare in rural areas; develop-

ment of agriculture adopting climate change for the purpose of protection of environment, supply intensive growth in agrarian sector by means of application of advanced technology for protecting land and water resources and increase of rationality of land use, which defined by strategic road map about production and processing of agricultural products in Azerbaijan Republic to achieve high competitive and stable development of agricultural sector in Azerbaijan, application of salary acquires great importance as a factor that possesses stimulated role, supplies reproduction of population and improves social welfares.

Issues of Application of Salary in Agrarian Sector

Agriculture has become an important tool for development and prosperity of every village, city and country since population of the Earth has started to learn how to grow wheat (Fayer, 2014).

Agriculture has played a great role in world's economy for long years. It is one ofthe primary and developed economic activity (Bendlin et al., 2016). Social and economic factors play an important role in agricultural production (Hashmi et al., 2016). On this point, value and price is very important in agriculture sector as it is in all management sectors (Bendlin et al., 2016). Though agriculture is related to production of raw commodity and product, use of natural resources, material and non-material assets, only trade (especially foreign trade) helps farmers to benefit from economic potential of this product (Bruni and Santucci, 2016).

Developing countries are usually characterized by double economic system, Conventional agricultural sector and modern capitalism. Productivity in conventional agricultural sectors is lower than that in modern capitalism (Dethier and Effenberger, 2012). According to the model advanced by Lewis (1954) and enlarged by Ranis and Fei (1961) there is labour surplus in agricultural sector and labour productivity is low. In compare with other sectors salary is also low in this sector. This causes to switch of labour from agricultural sector to other sectors and leads to economic increase. Besides it, Schultz (1964) emphasized importance of food storage of agricultural sector. He believed that agriculture is significant for agricultural sector. Agriculture supplies people with food and economic increase is impossible without it. Kuznets (1966) had similar thoughts and through his empiric analysis noted that agricultural sector might lose its significance due to increase of economic increase. Johnston and Mellor (1961) based on model of Louis, valued agricultural sector as active sector of economics. Singer (1979) emphasized that agriculture played an active role in economic increase through connection between production and consumption and noted that development strategy of the country should

be managed by agriculture but not export. That will increase productivity of agriculture.

It is necessary to study several factors for efficiency of production (Hashmi et al., 2016). Stability and effeciency of agriculture depends on a long-period constant unchangeable productivity (Hashmi et al., 2016). Economic development, being one of five subsystems of agrarian industrial complex of production areas of agriculture (Mihailovic et al., 2014), rapidly change in developed and countries with economies in trasition (Gjokaj et al., 2017). Agriculture is characterized with high uncertainty and risk and farmers from countries with economies in trasition come across with additional dificulties (Gjokaj et al., 2017). It should be noted that agriculture has strong effect on environment and processed and managed by people (Sudrajat et al., 2017). In other words stability of production of agriculture and nutrition product consists of three aims such as social, economic and ecological aims that are important in equal and comple each other (Sudrajat et al., 2017). Agriculture is leading sector in region economies (Anang and Yanwen, 2014). An important element in analysis of change in production of agriculture is to estimate effeciency of the factors that create these changes (Domanska et al., 2014).

It should be noted that salary in agrarian sector is as topical as minimum salary. Its research is widely spread among economists. Research shows influence of salary to unemployment and all economic increase as in minimum salary.

There are a lot of factors that effect on price variation. One of them is, certainly, the salary of people engaging agricultural production (Stella, 2014). According to the research of Stella (2014) salary was lower than there were in other fields or it was analogical to the salary of employees of the same profession in other sectors. However in most cases that difference was rather high.

We should note that agrarian farm, in most cases, is realized minimal salary. As American farm owners do not have to pay minimum salary to all agrarian labourers (Anita, 2013). But it should be noted that in order to eliminate poverty salary policy assumes great importance, especially in rural areas (Mayer, 2013).

Besides them other scientific economists such as Sarah O. Rodman, Colleen L. Barry, Megan L. Clayton, Shannon Frettoroli, Ronny A Neff and Lainie Rutkow researched salary and minimum salary in agriculture at the state level. Louis J. Dukoff was one the first scientists who researched salary in agrarian area of the USA in 1945.

It is said in "Application opportunities of minimum salary in agrarian sector and domestic sector" account that minimum salary can concern to only competent labourers in agrarian sector. Labourer's product and salary payability of employers should be taken into consideration.

One of the economists Jacobs (2009) maintained that low salary in agrarian sector cannot be satisfied. As their demand is exceeded social acceptable rate. The reason for this is that big amount of salary is paid to agrarian farm tools and it means that their product safety is much sensitive to shock of nutrition product.

Salary issues are agenda in agrarian sector of developing countries. As according to Newman's and other's (1997) research labourers of agrarian areas in South Africa are not only paid in cash. They are also provided with food in certain amount, clothes, technique and other advantages. Bhorat (2000) and Herch (2005) researched influence of minimum salary to agrarian employment in South Africa. Bhorat et al. (2012) studied result of minimum salary, result of employment in agrarian sector in 2000-2007 and indicated that it decreased by 15%. Though later Newman et al. (1997) approved minimum salary, Brauen-Latengo (2006) highlighted that minimum salary is not rather enough for agrarian labourers and their family members to supply living standard. Simbi and Aliber (2000) said that concern of minimum salary in agrarian sector will deteriorate crisis that spread in agrarian regions. They referred to opinion by Bhorat (1999) who maintained that minimum salary would effect on employment negatively in agrarian sector. On the other hand, Newman and others (1997) affirmed that if amount of fixed minimum salary exceeded average salary, labour would be substituted with machine and equipments. Neumark and Wascher (2007) noted that unemployment in agrarian area is expected result of minimum salary legislation. Conradie (2005), also Bhorat et al. (2012) valued effect of minimum salary. Conradie (2005) defined that agrarian minimum salary had not affected on unemployment.

In the countries where salary in agrarian areas researched a lot such as Indian economists Ravallion and others (1993) and Gaiha (1997) came to conclusion that increase of salary had little effect on unemployment. Narayanamoorthy and Bhattarai (2013) studied growth rate of real salary in agriculture and tried to find factors influenced it. Giri and Pao (1961) and Krishnaji (1971) researched seasonal changes of salary rate in agrarian sector.

In addition, Guido (2005) studied influence of liberalization of world agriculture to salary, unemployment and employment in Argentina, linked salary and employment with agrarian policy in developing countries, Davis (1998) studied unemployment in Europe, support of salary in America, national markets and international trade in it.

Methodology

The most common type of econometric model regression analysis method has been applied to. Econometric models are successfully applied in micro and macro level of economics. By means of these models theoretic issues of economics is checked through mathematic statistics based on factual or empirical materials. On this point, creating a model and checking adequacy is directly connecting with correlation of mathematical statistics and regression analysis. In fact, a lot of factors have effect on figures of economic variables (indices). In $y = f(x)$ x is a vector consists of m quantity of components: $x = (x_1, x_2, \dots x_m,)$. Estimating linear connection (regression) between y and x:

$$y = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \dots + \alpha_m x_m + \varepsilon, \qquad (1)$$

where: $\alpha = (\alpha_0, \alpha_1, \dots, \alpha_m)$ – vector is regression coefficient, ε is an accidental error. It is supposed that ε_i – errors is distributed normally with zero average and fixed dispersion. When ε_i and ε_i $i \neq j$ then is said they are statistically dependent. Thus, it is necessary to estimate α_j parameters in $(m + 1)$ quantity in accordance with selection selected from observations (trials) in n quantity. More precisely, it is estimated generalized (multinominal) linear regression dependence between u and x variables.

The problem is to find α vector in $(m + 1)$ size. These found elements of vector are value of appropriate elements in α vector. The problem is generally solved by means of Least Squares Method (LSM). By means of this method equation is valued:

$$y = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \dots + \alpha_m x_m + e, \qquad (2)$$

Total square of remainder (propensity) here is minimized: $Q = \min \sum_i e_2^i$.

In order to solve problem formally it is necessary to meet $(n \geq m + 1)$ condition. $(n - m - 1)$ positive distinction is called free degree number (quantity). Quantity of observation should be at least three times more than quantity of valued parameters to provide statistic reliability (significance) of valuation.

According to α_j special derivatives in minimum point of Q function equals to zero. These special derivatives are linear function of a_j quantities. We get system with linear equation in (m+1) number and variables in (m+1) number. This system is called normal equation system. Such systems have single solution.

$t - statistic$ indicates significance of variables in the model, and that index should be more than 2. As value of this index is high, it indicates to a great importance of $t - statistic$ in equality. In most cases alternative peculiarities are used to provide reliability trials for calculated coefficient. For majority of models calculation period is 2005-2016.

Analysis

Among indices used in analysis of current condition and competitiveness of agriculture, role of macroeconomic and financial indices are most significant. They are wide and detailed database for economy, spheres and agrarian sectors as well.

Concerned to production accounts and generation of income in agricultural sector the followings can be said, between 2015/2005 gross output increased by 3.28 times, between 2015/2010 it increased 1.51 times, relatively at the same period intermediate consumption increased by 3.76 and 1.60 times, added value by 2.95 and 1.43 times, labour cost by 1.88 and 1.35 times, other production taxes 2.50 and

2.54 times, gross profit by 3.04 and 1.43 times, consumption of main funds by 1.09 and 0.85 times, net profit by 3.25 and 1.47 times (Table 1). It should be noted that, 48.39% of 3.28 times increase in gross output is share of intermediate consumption, 51.61% out of it is share of added value between 2015/2005, 51.19% of 1.51 times increase in gross output is share of intermediate consumption, 48.80% out of it is share of added value between 2015/2010. Dynamics of gross weight of share of agricultural sector in economics contributes to express opinions about roles of it and other sectors in economics (Table 2).

It is discovered from analysis of dynamics of net weight of share of agricultural sector in economics between 2005/2015 net weight of gross output decreased by 15.06%, increased

Table 1*

Production accounts and generation of incomes in agricultural sector, in current prices, in mln manats

	Gross Output	Intermediate Consumption	Added Value	Labour Cost	Other Production Taxes	Gross Profit	Consumption of Main Funds	Net Profit
2005	1 891.6	753.7	1 137.9	83.4	13.8	1 040.7	98.0	942.7
2006	2 151.4	822.0	1 329.4	89.0	16.1	1 224.3	127.7	1 096.6
2007	3 060.4	1 159.4	1 901.0	91.4	25.1	1 784.5	123.9	1 660.6
2008	3 652.9	1 406.9	2 246.0	97.2	33.0	2 115.8	130.5	1 985.3
2009	3 875.5	1 696.0	2 179.5	112.3	30.6	2 036.6	116.9	1 919.7
2010	4 117.0	1 772.4	2 344.6	116.8	13.6	2 214.2	126.5	2 087.7
2011	4 945.7	2 302.2	2 643.5	125.4	19.7	2 498.4	149.2	2 349.2
2012	5 281.5	2 467.8	2 813.7	133.3	20.9	2 659.5	154.4	2 505.1
2013	5 836.7	2 714.5	3 122.2	147.0	27.3	2 947.9	157.6	2 790.3
2014	5 814.9	2 675.7	3 139.2	153.7	18.0	2 967.5	201.8	2 765.7
2015	6 196.5	2 837.1	3 359.4	157.2	34.5	3 167.7	107.3	3 060.4

*Made up by the author based on information in www.stat.gov.az

Table 2
Dynamics of net weight of share of agricultural sector in economics

	Gross Output	Share of intermediate consumption in economics	Net weight of added value in GDP	Net weight of labour cost of hired labourer	Share of labour cost in gross added value	Consumption of main funds	Share of consumption of main funds in gross added value
2005	9.3	39.8	9.1	3.0	0.7	7.9	0.8
2006	7.5	38.2	7.1	2.8	0.5	8.4	0.7
2007	7.7	37.9	6.7	2.1	0.4	7.2	0.5
2008	6.7	38.5	5.6	1.7	0.3	5.9	0.3
2009	7.9	43.8	6.1	1.8	0.3	5.5	0.4
2010	7.1	43.1	5.5	1.7	0.3	5.5	0.3
2011	7.0	46.5	5.1	1.6	0.3	6.2	0.3
2012	7.0	46.7	5.1	1.5	0.3	6.0	0.3
2013	7.2	46.5	5.4	1.5	0.3	6.0	0.3
2014	7.0	46.0	5.3	1.5	0.3	5.8	0.4
2015	7.9	46.0	6.2	1.5	0.3	5.9	0.4

www.stat.gov.az

by 11.26%, relatively share of intermediate consumption in output increased by 15.57% and 6.72%, net weight of added value in GDP (gross domestic product) decreased by 31.87% and increased by 12.72%, net weight of labour cost of hired labourer decreased by 50.0% and 11.87%, share of labour cost in gross added value decreased by 57.15% and later remained stable, consumption of main funds decreased by 25.32% and increased by 7.27%, share of consumption of main funds in gross added value decreased by 50.0% and increased by 33.33%.

It is necessary to emphasize that to define level of average monthly nominal salary, which possesses main stimuli in development of each area and is reproduction supply of forces of production, in details is one of an important factor in gross economic development, to improve living standard of population, arrangement of employment. On this point, there is great distinction in levels of average monthly salary on separate activity types (Table 3).

As price factor assumes great importance in development of competitive and export oriented agricultural area, let's have a look at dependence of producer price indices of agricultural products on salary payment in structure of expenses spent on production of agricultural product, level of average monthly nominal salary in agriculture, salary fund calculated for labourers working in agriculture area.

During researched years – 2005-2015 salary payment in structure of expenses spent on production of agricultural product remained unchangeable: in 2005 29.5% and 2015 29.9%. But hesitations, changes have been observed during those years. The lowest index was recorded in 2010 (23.3%) and the highest index in 2013 (33.0%). During those years level (in compare with average index of country economy, in percent) of monthly nominal salary of labourers in agriculture increased and decreased from 33.7% to 52.6%. However it was observed decrease in salary fund calculated for labours in agricultural area (including addition): in 2005 from 134.3 thousand manats to 103.5 thousand manats in 2015 (Figure 1).
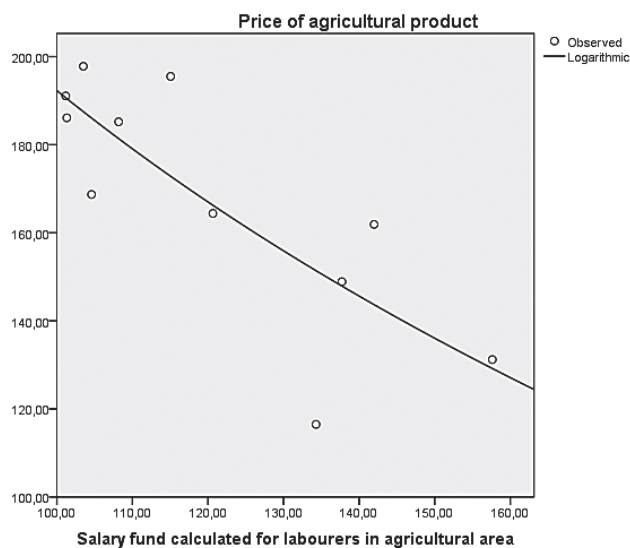
During research it was found out that there is not consecutive dependence between salary payments in structure of producer price indices of agricultural products and expenses spent on production of agricultural product. At the same time consecutive dependence between salary payments in structure of producer price growth of agricultural products and expenses spent on production of agricultural product. It is proved visually in the chart. However dependence of level (in compare with average index of country economy, in percent) of average monthly nominal salary on producer price growth of agricultural product ("S" function) and dependence of salary fund calculated for labourers in agricultural area on producer price growth of agricultural product (logarithmic) exist.

Table 3

Level of average monthly nominal salary on economic activity types (in comparison with average index on economy of the country, in percent)

| Economic types of activity	2005	2010	2011	2012	2013	2014	2015
Agriculture, Forestry and Fishery	33.7	48.4	53.9	50.5	51.3	54.3	52.6
Mineral Industry	410.5	303.1	324.1	351.9	356.7	394.6	465.0
Processing Industry	93.8	96.7	97.3	100.1	103.3	111.5	113.1
Electrical Power, Gas and Evaporation Production, Distribution and Supply	108.9	105.4	113.5	111.4	109.9	110.1	109.9
Water Supply, Waste treatment	52.1	59.6	63.7	69.0	76.4	74.6	71.4
Construction	188.7	152.6	142.6	147.5	147.1	141.0	145.1
Trade; Repair of Transport	97.1	85.3	92.0	86.3	85.6	84.1	81.0
Transport and Storage Facilities	100.8	119.2	122.7	128.4	126.2	119.3	123.3
Tourist accommodation and Catering	127.8	100.7	105.7	101.6	104.6	104.4	99.5
Information and Communication	165.7	160.3	158.3	156.1	158.9	165.4	160.0
Finance and Insurance	252.2	298.7	275.8	264.9	265.0	269.7	259.3
Immovable Property Operations	45.5	50.7	62.7	64.2	69.1	69.3	66.0
Qualification, scientific and technical activity	262.5	178.6	164.7	155.8	156.9	150.7	161.1
Administrative and Subsidiary Service	362.9	158.9	146.9	141.4	137.4	127.5	116.2
The Government and Protection of a State; Social maintenance	108.3	113.6	110.6	113.6	107.0	107.9	106.0
Education	53.4	82.0	77.8	72.1	69.1	67.0	64.5
Health and Social Service to Population	36.6	46.8	45.0	44.0	42.7	44.5	43.7
Relaxation, Entertainment and Art activity	41.6	62.9	57.9	53.0	51.9	56.3	54.1
Other fields service	61.3	84.6	91.1	92.3	88.8	90.0	94.6
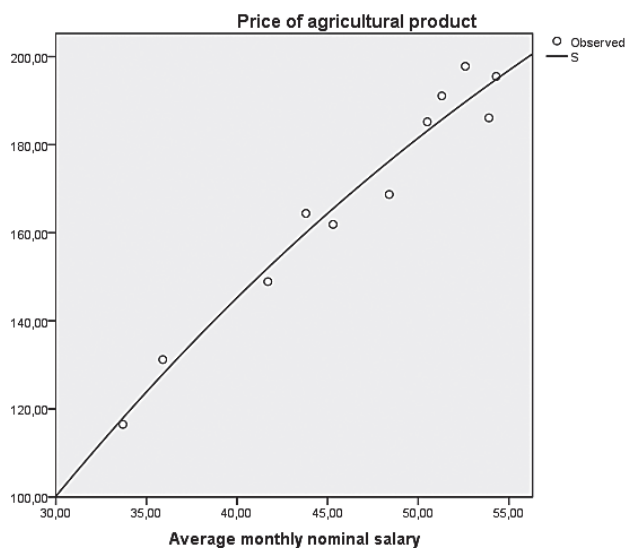
A) Dependence of level (in compare with average index of country economy, in percent) of average monthly nominal salary in manats (AZN) on producer price growth of agricultural product ("S" function)

B) Dependence of salary fund in manats (AZN) calculated for labourers in agricultural area on producer price growth of agricultural product (logarithmic)
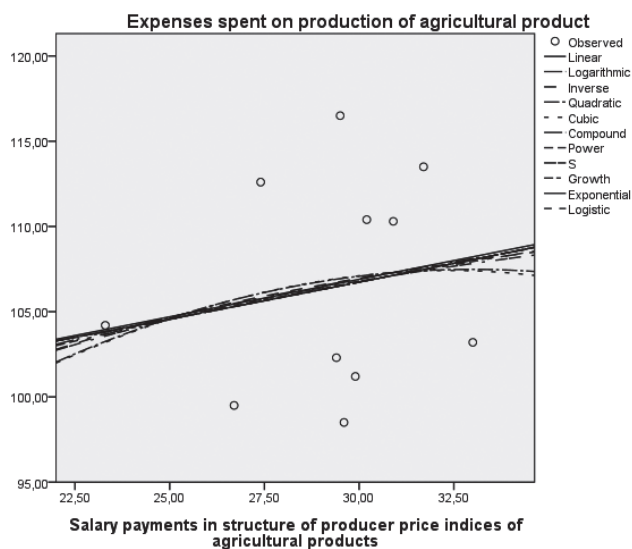
C) Dependence between salary payments in manats (AZN) in structure of producer price indices of agricultural products and expenses spent on production of agricultural product
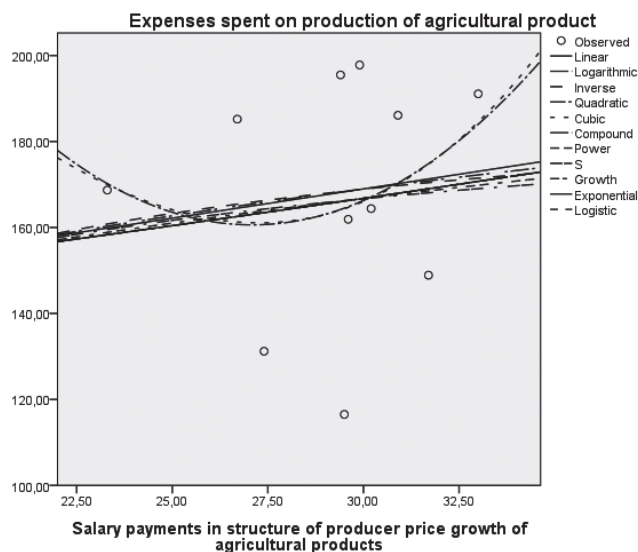
D) Dependence between salary payments in manats (AZN) in structure of producer price growth of agricultural products and expenses spent on production of agricultural product

Fig. 1. Price of products and expenses spent of production

One of the purposes in the article, we introduced in, is to conduct comparative analysis of average monthly nominal salary. Level of average nominal salary on economic activity types (in comparison with average index on economy of the country, in percent) in agriculture, forestry and fishery increased from the lowest index 33.7% in 2005 up to 52.6% reached 56.08% in 2015. However activity type of Health and Social Service to Population preceded it again. Besides it, it is clarified from Table 4 that though by the end of the year agriculture, forestry and fishery took 3rd place on index of value of main fund among other sectors, took 4th place on index of GDP production, net weight and share of intermediate consumption in output, took 5th place on index of structure of economic activity types of consumption of main funds and share of consumption of main funds in gross added value, took 7th place on share of intermediate consumption in output, took 13th and 14th places on share of labour cost in gross added value and structure index of labour cost of hired labourers and took 16th place on physical volume index of added value (percent in compare with previous years), it took the last place after activity type of Health and Social Service to Population on average monthly nominal salary index of employed population. However indices introduced in this activity type, as a rule, is different. In addition, though Finance and Insurance, Qualification, scientific and technical activity, Administrative and Subsidiary Service, Information and Communication, Construction, Transport and Storage Facilities and other sectors is low on several indices, they shared 2-7 places on the average monthly nominal salary index of employed population after mineral industry.

According to the econometric analysis of dependence of average monthly nominal salary in separate fields on gross output, intermediate consumption, added value, labour cost, other production taxes, gross profit, consumption of main fund, net profit shows that agriculture, forestry and fishery (0.05)[1], electrical power, gas and evaporation production, distribution and supply (0.12), water supply, waste treatment (1.18), finance and insurance (3.44), immovable property operations (0.13), administrative and subsidiary service (0.59), the government and protection of state (0.14), social maintenance, health and social service to population (0.30) include in sectors that highly depend on intermediate consumption (Table 5).

Coefficient of intermediate consumption is more than unit in these sectors such as water supply, waste treatment, finance and insurance activity sectors. Only water

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[1] Parameters of regression

supply, waste treatment (1.96) include in sectors that exists correlation dependence on average monthly salary of added value. There is statistically significant dependence between labour cost and mineral industry (0.82), processing industry (0.55), electrical power, gas and evaporation production, distribution and supply (2.16), trade; repair of transport (0.22), transport and storage facilities (0.65), tourist accommodation and catering (2.47), information and communication (2.33), Immovable property operation (2.85), qualification, scientific and technical activity (0.82), the government and protection of state; social maintenance (0.16), education (0.19), relaxation, entertainment and art activity (1.21), other fields service (1.6). Other production taxes are related to agriculture, forestry and fishery (–0.94), electrical power. gas and evaporation production, distribution and supply (–8.99), information and communication (5.66), immovable property operation (7.58), other fields service (24.03). Gross profit is related to agriculture, forestry and fishery (0.06), processing (0.12), water supply, waste treatment (–3.71), construction (0.07), transport and storage facilities (0.19), other fields service (0.23). Consumption of main funds is closely connected with mineral industry (3.42), transport and storage facilities (–0.37), immovable property operation (–0.55), other fields service (–1.22). As gross output and net profit is not enough significant for statistics, they are eliminated from the model that contents dependence of average monthly salary of all separate sectors on several factors (Table 6). One can come to conclusion that there is large discrepancy between these two indices of great economic significant and average monthly salary. In other words, though gross output and net profit play an important role in development of gross economic they have little effect on formation of average monthly salary. By means of PASW Statistic 18 statistics packages have been eliminated one after another from the models.

Discussion and Conclusion

It is studied dependence of annual average monthly nominal salary on separate activities of economics on gross output, intermediate consumption, added value, labour cost, other production taxes, gross profit, consumption of main funds, net profit in the next stage of research. It has been defined that average monthly nominal salary on separate activities of economics has mutual dependence on gross profit (0.07), net profit (relatively (0.05),(0.04),(0.03), (0.03), (0.04), (0.05), (0.07)) in 2006, 2007, 2008, 2010, 2012, 2013 and 2014, other production taxes in 2009 (–8.54), intermediate consumption (0.73) in 2011, labour cost (0.79), other production taxes (–188.02),

Table 4
Place of separate sectors of economics on macroeconomic indices in economic activity types

Sector	Code	GDP production, net weight		Share of intermediate consumption in output		Net weight of added value in DGP		Structure of labour cost of hired labourers		Share of labour cost in gross added value		Structure of consumption of main fund on economic activity types		Share of consumption of main funds in gross added value		Average monthly nominal salary of employed population, in manat		Physical volume index of added value, compare with previous years, in percent		Main funds, by the end of year, in milliard manat	
		Index	Place	Index	Place	Index	Place	Index	Place	Index	Place	Index	Place	Index	Place	Index	Place	Index	Place	Index	Place
Agriculture, Forestry and Fishery	Y1	5.73	4	43	7	6.11	4	1.92	14	0.37	13	6.44	5	0.43	5	111.99	18	3.65	16	4.80	3
Mineral Industry	Y2	40.69	1	8.4	19	43.53	1	12.16	3	2.26	3	16.91	2	1.12	2	903.73	1	6.19	7	28.13	1
Processing Industry	Y3	4.77	6	67.7	1	4.96	6	5.45	7	1.00	7	12.98	3	0.87	3	237.19	11	4.29	13	4.54	5
Electrical Power, Gas and Evaporation Production, Distribution and Supply	Y4	1.40	14	58.3	3	1.34	13	2.13	13	0.37	14	3.91	10	0.22	10	265.53	8	2.69	18	4.69	4
Water Supply, Waste treatment	Y5	0.16	19	58.6	2	0.17	19	0.82	17	0.17	17	0.29	19	0.00	19	180.63	14	1.48	19	0.94	13
Construction	Y6	9.67	2	56.2	4	9.07	2	8.46	5	1.56	5	9.11	4	0.59	4	370.63	6	13.39	3	2.45	8
Trade; Repair of Transport	Y7	7.31	3	35.2	11	6.64	3	13.38	2	2.40	2	4.66	7	0.29	7	205.52	12	11.25	4	0.88	14
Transport and Storage Facilities	Y8	5.40	8	34.3	12	5.21	5	7.12	6	1.33	6	17.62	1	1.13	1	281.64	7	6.30	6	5.91	2
Tourist accommodation and Catering	Y9	1.58	13	33.7	14	1.28	14	1.1	16	0.20	16	1.57	15	0.10	15	252.53	10	21.69	1	0.27	17
Information and Communication	Y10	1.78	11	35.3	10	1.81	10	2.58	11	0.46	11	3.94	8	0.26	8	393.16	5	18.52	2	1.79	10
Finance and Insurance	Y11	2.05	9	23.9	17	1.86	8	3.79	10	0.68	10	2.66	13	0.17	13	665.45	2	5.77	8	1.33	11
Immovable Property Operations	Y12	1.97	10	46.4	6	1.53	12	0.34	19	0.06	19	3.01	11	0.22	11	143.66	16	7.79	5	3.85	6
Qualification, scientific and technical activity	Y13	1.30	15	32.0	16	1.25	15	5.33	8	0.96	8	1.17	16	0.07	16	453.25	3	4.04	14	0.65	16
Administrative and Subsidiary Service	Y14	0.58	18	32.7	15	0.54	18	2.35	12	0.40	12	0.65	18	0.03	18	416.23	4	5.73	9	0.14	19
The Government and Protection of a State; Social maintenance	Y15	2.40	8	51.3	5	2.31	8	11.06	4	2.01	4	5.21	6	0.37	6	255.43	9	4.31	12	2.58	7
Education	Y16	3.18	7	17.3	18	3.06	7	15.13	1	2.70	1	2.97	12	0.20	12	168.17	16	2.76	17	1.11	12
Health and Social Service to Population	Y17	1.66	12	37.2	8	1.55	11	4.4	9	0.78	9	3.91	10	0.24	9	104.38	19	3.75	15	2.23	9
Relaxation, Entertainment and Art activity	Y18	0.78	17	33.8	13	0.65	17	1.73	15	0.29	15	2.11	14	0.12	14	128.5	17	5.61	10	0.68	15
Other fields service	Y19	0.88	16	37.1	9	0.75	15	0.75	18	0.14	18	0.88	17	0.07	19	204.00	13	4.78	11	0.25	18

Table 5
Models of average monthly nominal salary in separate sectors of economics on economic activity types

Average monthly nominal salary	const	Gross output X1	Intermediate consumption X2	Added Value X3	Labour cost X4	Other production taxes X5	Gross Profit X6	Consumption of main funds X7	Net Profit X8	R^2	F	P-(F)	DW
Y1	−38.8836*** (−3.642)		0.04844** (2.938)			−0.93841** (−2.459)	0.05512** (2.884)			0.993637	$F_{(3.7)}$ 364.3539	4.77e-08	1.499152
Y2	−765.231*** (−8.839)				0.82315** (3.205)			3.42347*** (7.554)		0.986380	$F_{(2.8)}$ 289.6963	3.44e-08	2.704445
Y3	−70.0351** (−3.096)				0.54945*** (6.088)		0.11743*** (4.172)			0.981359	$F_{(2.8)}$ 210.5775	1.21e-07	1.534564
Y4	11.4881 (0.7302)		0.11746*** (4.490)		2.15856*** (25.93)	−8.99484*** (−4.571)				0.993555	$F_{(3.7)}$ 359.6871	4.99e-08	1.797371
Y5	−3.64375 (−0.1463)		1.18241*** (4.902)	1.96042*** (4.987)			−3.71313** (−3.152)			0.974728	$F_{(3.7)}$ 89.99514	5.91e-06	2.259024
Y6	243.211*** (8.090)						0.07188*** (9.010)			0.900204	$F_{(1.9)}$ 81.18428	8.46e-06	
Y7	48.1528*** (4.497)				0.22392*** (22.17)					0.982011	$F_{(1.9)}$ 491.3047	3.66e-09	1.368471
Y8	−80.1784*** (−4.832)				0.64596*** (13.68)		0.18702*** (13.00)	−0.36715*** (−4.329)		0.993433	$F_{(3.7)}$ 352.9543	5.33e-08	1.804974
Y9	118.470*** (7.146)				2.46858*** (14.15)					0.956980	$F_{(1.9)}$ 200.2027	1.87e-07	0.936204
Y10	55.1393*** (3.752)				2.33561*** (23.75)	5.65896* (1.910)				0.993049	$F_{(2.8)}$ 571.4253	2.33e-09	1.868706
Y11	125.596 (1.336)		3.44005*** (8.529)							0.889911	$F_{(1.9)}$ 72.75205	0.000013	1.601874
Y12	33.8294* (2.280)		0.12803*** (4.294)		2.85868*** (8.529)	7.57943*** (4.405)		−0.55003*** (−4.846)		0.993900	$F_{(4.6)}$ 244.3844	9.04e-07	2.585927
Y13	278.817*** (7.362)				0.82363*** (8.430)					0.887583	$F_{(1.9)}$ 71.05886	0.000015	1.328484
Y14	452.187*** (20.26)		0.59073*** (3.392)							0.561088	$F_{(1.9)}$ 11.50523	0.007975	1.565461
Y15	44.3381 (1.515)		0.14156** (3.321)		0.16420*** (5.102)					0.949583	$F_{(2.8)}$ 75.33883	6.46e-06	0.828896
Y16	20.3435*** (6.835)				0.19186*** (75.17)					0.998410	$F_{(1.9)}$ 5649.861	6.61e-14	2.673389
Y17	25.9493*** (4.556)		0.30343*** (22.29)							0.982202	$F_{(1.9)}$ 496.6722	3.49e-09	1.891285
Y18	20.6942* (2.116)				1.21088*** (17.199)					0.970454	$F_{(1.9)}$ 295.6133	3.43e-08	2.465082
Y19	68.0484*** (8.319)				1.60085*** (5.917)	24.03581*** (5.461)	0.22649*** (8.626)	−1.2278** (−3.695)		0.997377	$F_{(4.6)}$ 570.3228	7.21e-08	2.492689

Nota: 1.(t-stat); 2. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$;

Table 6
Models of dependence of average monthly nominal salary on main macroeconomic indices annually in economics

Average monthly nominal salary	const	Gross output X1	Intermediate consumption X2	Added Value X3	Labour cost X4	Other production taxes X5	Gross Profit X6	Consumption of main funds X7	Net Profit X8	R²	F	P-(F)	DW
2005	137.755*** (4.610)						0.06875** (2.632)			0.289557	F(1.17) 6.928719	0.017473	1.510114
2006	176.913*** (4.787)								0.05066** (2.762)	0.309723	F(1.17) 7.627805	0.013333	1.686806
2007	242.315*** (5.448)								0.04115*** (3.070)	0.356658	F(1.17) 9.424518	0.006937	1.698229
2008	288.806*** (6.526)								0.03467*** (3.070)	0.442398	F(1.17) 13.48770	0.001887	1.732282
2009	375.248*** (6.881)					−8.54072* (−1.944)			0.07519*** (3.833)	0.519869	F(2.16) 8.662106	0.002824	2.070867
2010	348.892*** (6.714)								0.03337*** (2.787)	0.313624	F(1.17) 7.767783	0.012645	1.913402
2011	317.030*** (3.500)		0.72607* (1.843)		0.79399* (1.838)	−188.022* (−1.922)		2.32899* (1.796)	0.70495* (2.015)	0.569143	F(5.13) 3.434482	0.033839	1.585963
2012	391.491*** (7.247)								0.04375*** (4.276)	0.518146	F(1.17) 18.28042	0.000511	1.708096
2013	409.319*** (6.955)								0.04857*** (4.249)	0.515071	F(1.17) 18.05671	0.000541	1.627820
2014	407.959*** (6.309)								0.06508*** (4.682)	0.563229	F(1.17) 21.92202	0.000214	1.610169
2015	412.577*** (4.971)		−0.17208*** (−3.700)			21.5731*** (5.898)				0.687764	F(2.16) 17.62163	0.000090	1.704768

Nota:: 1.(t-stat); 2. $* p < 0.05$; $** p < 0.01$; $*** p < 0.001$;

consumption of main funds (2.33), intermediate consumption (–0.17) in 2015 and other production taxes (21.57). However we should emphasize that during these years correlation coefficient related to specified indices of annual average monthly nominal salary on separate activity types in economics has been low and hesitated ($0.289557 \leq R^2 \leq 0.687764$).

Either through economic or econometric analysis we can come to the following conclusion:

● Serious approach to dynamics of gross weight of share of agricultural sector in economics contributes to express opinions about roles of it and other sectors in economics.

● There is not consecutive dependence between salary payments in structure of producer price indices of agricultural products and expenses spent on production of agricultural product and salary payments in structure of producer price growth of agricultural products and expenses spent on production of agricultural product. However dependence between level of average monthly nominal salary of agricultural labourers and producer price growth of agricultural products, also between salary fund accounted for agricultural labourers and producer price growth of agricultural products should be taken into consideration in agrarian policy and economical activities.

● To define level of average monthly nominal salary, which possesses main stimuli in development of each area and is reproduction supply of forces of production, in details is one of an important factor in gross economic development, to improve living standard of population, arrangement of employment. On this point, it is necessary to eliminate great distinction in levels of average monthly salary on separate activity types.

● As gross output and net profit is not enough significant for statistics, they have been eliminated from the model that contents dependence of average monthly salary of all separate sectors on several factors. One can come to conclusion that there is too much discrepancy between these two indices of great economic significant and average monthly salary. In other words, though gross output and net profit play an important role in development of gross economic they have little effect on formation of average monthly salary.

● However we should emphasize that during these years correlation coefficient related to specified indices of annual average monthly nominal salary on separate activity types in economics has been low.

● We think it will be significant to take into consideration solution of problems in research to achieve 9 strategic goals to organize significant environment for establishing of production and processing sector of competitive agricultural products maintaining fixed development principles at the expense of realization of Strategic Road Map about production and processing of agricultural products in Azerbaijan Republic during 2016-2020 years.

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