

The Level of Migration Achieved and its Impact on the Development of Agriculture and the National Income Earned

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Abstract: Migration of the population in any country proved to be a regular, essential trend affecting the total economic and social development. Accordingly, this was found to impact the development of agriculture as well. The distribution of the active population and labor force is known to be affected by industrialization and the expansion of the social distribution of labor. Changes in the social and economic structure of the population and labor force in agriculture have been recorded as well. Mainly short-term effects of migration trends on the development of agriculture have been studied to date. However, both social and economic long-term impacts have been of no concern whatsoever. No doubt, the process of migration of the population has been most rapid in our country compared with some other countries of the world. Major concern was focused on the unfavourable impact of migration. The mechanical over-migration to non-agricultural activities has contributed to non-productive employment in industry and other non-agricultural activities. On the other hand, some major production facilities, especially natural resources in the rural regions have been abandoned. This hypothesis represents a major mistake because natural resources are known to have been extensively used especially under the conditions of the underdeveloped economy and overpopulated agricultural areas.

Key words: migration, demographic community groups, agricultural development, industrial development, technical progress and labor productivity, farm, income parity and national income

In the process of both social and economic development a mutual relationship between economic and agricultural development on one hand and demographic processes on the other has been noted. Every phase of both social and economic development was noted to contribute to different trends and

relationships between population growth and economic development, i.e. agricultural development.

Economic and demographic changes of the population and labor force affected by economic development and migration of the population represents the initial and basic factor and the precondition for changes provoked to secondary factors and resources of agricultural development. Labor force represents the basic economic resource and is the component part of labor potentials and the results of demographic changes effecting major qualitative and quantitative processes of agricultural industrialization and professional transformation. In addition to economic, demographic and socioeconomic changes in the structure of both population and labor force, major technical and technological processes of modernization based on the application of modern agricultural production practices have been initiated. This has contributed to qualitatively new conditions enhancing the development of labor productivity and agriculture of goods and commodity production increasing its social product and national income.

Numerous social and economic relationships have contributed to the importance for initiating investigations on the economic and demographic processes and the development of agriculture. Generally speaking, population and labor force trends are affected by objective trends having an impact on the total economic and social development in any country. It is a usual trend that in addition to the changes in the number and structure of the total population there are additional share changes in economic and social features of both total and agricultural labor force. In addition to the dynamic and structural changes of the agricultural labor force, qualitative changes have been noted in the economic conditions for agricultural development, technical and technological enhancement and labor productivity increase.

Three specific phases of development may be noted with regard to migration of the population as a legal feature of demographic changes having an impact on the process of social, economic and agricultural development (Simić, 1994). In the initial phase of economic and agricultural development migration was noted to reach the level of insignificant decline of the relative share of the agricultural in the total population. At this particular stage of both economic and agricultural development a substantial overpopulated agriculture has been noted, characterized by extensive and low productivity of the agricultural production.

In the transitional phases of economic development and migration of the population a rapid decline of the share of the agricultural population was noted. It declined although its number was high. The phase was characterized by intensive migration trends of the population and labor force from agricultural to non-agricultural activities, from rural to urban and mixed agglomerations. The process was especially characterized by intensive commodity production which spread rapidly, restricting extensive and semi-natural forms of production.

The third phase of demographic changes affected by economic and industrial development was characterized by a rapid decline of the number and relative share of the agricultural population in the total population contributing to a decline of the birth rate of the agricultural population and unfavourable results due to rapid changes in the age structure of the population. However, at this stage of economic development due to migration processes initiated, qualitati-

vely new conditions for the use of agricultural machinery and the application of modern technological advances have been recorded contributing to radical changes in the production structure and the agricultural sector on the whole. Along with the process of migration there is a closer link between agriculture and industry, i.e. intensive process of agricultural industrialization and food production has been recorded. This phase has been followed up by the processes of diversification and integration and linkage between primary production and different phases of processing of agricultural products and the production of final food products and commodities.

This study focuses on the impact of migration on some basic trends of agricultural development in the Republic of Serbia over the period 1971-1991 using the method of community classification and comparative analysis of the differences recorded¹.

The following demographic and economic indices were analyzed based on the differences between the community groups and according to the level of migration achieved over the period 1971-1991:

- changes in the number and relative share of the total and active agricultural population;
- differences in the number and structure of households considering income source (agricultural, non-agricultural, mixed and household without income);
- changes and differences in the level of the national income per capita and per active member achieved in both economy and agriculture;
- data on the economic structure according to community groups and changes in the share of agriculture, industry and other economic branches.

The share of the total and active agriculture population according to the demographic community groups was found to be in accordance with the level of migration of the population and labor force for agriculture. Changes in the share of the active agricultural labor force were found to be significant due to the impact of both economic and industrial development.

¹ The percentage of the share of agricultural in the total population based on the 1991 census was the indicator of the level of migration in the community. Using this criterion all the communities in the Republic of Serbia were classified into eight groups: group one involved communities (19) with a 5% relative share of agricultural in the total population; group 2 included 11 communities with a 5.1-10% share of the agricultural in the total population; group 3 encompassed 25 communities with a 10.1-15% share of the agricultural in the total population; 38 communities were included in group 4 with a 15.1-20% share of the agricultural in the total population; group five encompassed 35 communities with a 20.1-30% share of the agricultural in the total population; group 6 involved 29 communities with a 30.1-40% share of the agricultural in the total population; group 7 involved 15 communities with the 40.1-50% share of the agricultural in the total population and group 5 involved 17 communities with over 50% share of the agricultural in the total population. Statistical data based on the census carried out by the Republic of Serbia Statistical Office in the communities analyzed were computed and used for the classification of the demographic community groups shown in the tables.

As a result of migration significant changes were recorded in the relative share of the total and active agricultural population according to community groups in 1991 compared with 1971.

Tab. 1. Share of the total and active agricultural population according to community groups and the level of migration of the agricultural population in the Republic of Serbia

Community groups according to the % of agricultural population (1991)	1971.				1991.			
	Total agricultural population		Active agricultural population		Total agricultural population		Active agricultural population	
	thousand	% total=100	thousand	% total =100	thousand	% total=100	thousand	% total=100
Total	3630	44.0	2064	53.6	1694	17.3	1041	25.0
- 5%	162	9.8	80	11.4	50	2.2	28	2.9
5.1-10.0	169	24.2	97	39.9	54	7.9	35	11.3
10.1-15.0	405	38.1	216	48.2	142	12.0	87	17.4
15.1-20.0	926	44.5	503	55.0	410	16.5	246	24.2
20.1-30.0	666	50.7	399	66.2	240	23.8	202	33.8
30.1-40.0	619	69.0	323	77.6	327	33.7	184	46.9
40.1-50.0	294	75.7	193	83.4	136	45.0	100	56.2
Over 50.0 %	389	82.5	253	88.0	235	51.1	159	67.6

Based on the data given above, a more prominent declining trend of the agricultural population in the total population, i.e. a prominent decline of the active farmers in the total number of active individuals was noted beginning with the community groups having had the most prominent migration trend and ending up with the community groups having had a less prominent migration trend. Based on these trends the conclusion which tends to emerge is a more profitable agricultural development in the first demographic community group having had the most prominent migration trend compared with the community groups having had a substantially greater share of the agricultural population and labor force.

In addition to migration trends of the population effected by economic development, migration processes of farm household members have also been recorded. Based on migration trends of the population, some major changes in the social and economic structure of labor force were recorded, i.e. changes in the farm household structure according to income sources.

The total economic development and industrialization processes have rather effected the general process of migration trends of the population than the migration trends of the population from farm households and farms. This may be attributed to the process of maintaining farm activities despite off-farm employment.

Tab. 2. Share of farm households according to income sources and demographic community groups in the Republic of Serbia (1991)

Community groups according to the % of agricultural population (1991)	Farm groups				
	All groups	Agricultural	Non - agricultural	Mixed	Without income
Farm household structure according to income sources and demographic community groups					
Total	100	11.0	76.0	11.1	1.9
- 5%	100	1.0	95.6	1.7	1.7
5.1-10.0	100	5.5	86.9	5.9	1.7
10.1-15.0	100	8.8	81.0	8.4	1.8
15.1-20.0	100	10.8	75.0	12.2	2.0
20.1-30.0	100	17.8	64.7	15.4	2.1
30.1-40.0	100	22.8	50.8	24.3	2.1
40.1-50.0	100	28.5	40.4	29.0	2.1
Over 50.0 %	100	34.7	34.0	29.2	2.1

Off-farm employment along with the usual farm activities attributed to the lagging behind of agricultural development and contributed to the increase of labor productivity in relation to industrial development and the development of other non-agricultural branches. In developing countries mass migrations from rural to urban areas may less be attributed to the lack of manpower in urban regions and have generally not been followed by prominent development of the national economy as has been the case in the so called developed countries (Zelinsky, 1979). Migration trends of the population and labor force may be expected to decrease the number of farm households. However, contrary to some expectations members of farm households were strongly motivated in maintaining and inheriting farms thus creating additional sources of income and wages. Eventually, substantial differences in the social and economic structure between rural and agricultural households according to income sources were recorded (Table 2).

The share of farm households was noted to decline in the structure of farm households on one hand along with an increase of the share of non-agricultural and mixed farms on the other.

When analyzing the impact of demographic changes of labor force on the development of agriculture it is of major importance to study the properties with regard to national income earned in economy with special reference to agriculture considering migration trends of the population and diversification processes in economy. At each level of migration, changes with regard to the share of labor force, productivity labor trend and extent of the social labor division were recorded. Migration and labor force decline for agriculture have had a substantial impact on increasing national income per capita in economy, raising national income per capita and active member in agriculture. In general, an increasing national income in economy contributes to an increasing trend of labor productivity along with the increase of the national income per capita and per active member in economy.

The following two major factors were found to contribute to the increase of labor productivity in agriculture: scientific and technical advances and drainage of agricultural manpower to non-agricultural activities. This was proved based on the data showing differences in the level of national income per worker in economy and national income in agriculture per active household member according to demographic community groups. In addition, differences in the index trend of national income in economy and agriculture according to demographic community groups, i.e. depending on the level of migration of the population were found to prove the same (Table 3).

Tab. 3. National income per capita in economy and agriculture according to community groups and the level of migration achieved

Community groups according to the % of agricultural population (1991)	National income of economy					National income of agriculture				
	1974		1991		Difference	1974		1991		Difference
	Dinars per capita	Index	Dinars per capita	Index		Dinars per household member	Index	Dinars per household member	Index	
Total	12632	100	8530	100		7639	100	7920	100	
- 5%	20655	164	15782	185	+21	11207	147	14203	179	+32
5.1-10.0	19692	156	11103	130	-26	10317	135	10005	126	-9
10.1-15.0	15806	125	7589	89	-36	9360	123	7032	89	-34
15.1-20.0	11263	89	6507	76	-13	8115	106	6302	81	-25
20.1-30.0	9514	75	5489	64	-11	7785	102	5121	65	-37
30.1-40.0	8600	68	4520	53	-15	6002	79	4120	52	-27
40.1-50.0	7650	61	4055	48	-13	5409	71	4051	51	-20
Over 50.0%	6774	51	3739	44	-7	5255	69	3839	48	-21

*National income value in current prices

Classification of the communities according to the amount of the national income achieved points to the influence of migration on the structure of

economy in favour of a greater share of the activities of economic branches achieving a higher level of labor productivity.

Based on the data shown the conclusion which tends to emerge is a 3.7-fold greater national income earned in the first demographic community group compared with the farmers income in the eight group (communities with over 50% of agricultural population). According to the demographic community groups the differences in the level of the national income earned were found to exhibit a regular trend of migration impact on the formation of different conditions governing the development of agriculture and its income increase based on the raised level of labor productivity of farmers.

The conditions for earning parity income in agriculture in relation to the income earned in economy were equalized along with productivity increase. Based on the data analyzed the average income index per capita amounted to 165% in 1974 in economy in relation to the average income in agriculture per farm household member which amounted to 107% in 1991.

The less prominent disparity between agricultural income and the average income in communities having a greater share of agricultural population pointed to a lower development level of industry and other non-agricultural activities.

The level of migration achieved, i.e. the level of farmers' populated areas is the precondition for significant differences in the amount of the average national income per active worker in economy, i.e. per active household member in agriculture (Table 4). This index points to the impact of migration on the differences in the level of labor productivity achieved as well as on the effect on the national income earned. In addition, the causes for the disparity between income in agriculture and economy tended thus to be more prominent. According to the demographic community groups the results of the correlation-regression analysis proved a high correlation between the national income earned in economy and agriculture depending on the level of migration achieved.

In general, depending on the level of migration, favourable economic conditions based on scientific and technological advances and labor productivity achieved proved encouraging to national income in both economy and agriculture starting with the community groups having the highest percentage of agricultural population and labor force and ending up with those community groups having the lowest percentage of agricultural population and manpower.

Favourable conditions raising labor productivity and national income were recorded along with the development of economy in the migration process. This process was noted to be directly linked with the changes in the structure of economy where the impact of highly productive activities was recorded to increase. As a rule, a mutual relationship between economic development and changes arising in its structure, i.e. in the structure of the social product and national income was recorded.

Tab. 4. National income per active worker in economy and national income per active household member

Community groups according to the % of agricultural population (1991)	National income of economy				National income of agriculture					
	1974		1991		1974			1991		
	National income in economy	Index	National income in economy	Index	National income in agriculture	Index	Index, economy=100	National income in agriculture	Index	Index, economy=100
Total	27324	100	15826	100	13435	100	49.2	11314	100	71.5
- 5%	49064	180	23138	146	22695	169	46.3	31102	346	169
5.1-10.0	38544	141	21514	136	20035	149	52.0	25362	224	118
10.1-15.0	30415	111	15293	97	17975	134	59.0	20367	180	133
15.1-20.0	25632	94	14701	93	14939	111	58.3	12685	112	86
20.1-30.0	20280	74	13070	82	12995	97	64.1	10880	96	83
30.1-40.0	14227	52	9437	60	10070	75	71.0	6227	55	65
40.1-50.0	12849	47	9209	58	9090	68	71.0	5734	51	62
Over 50.0 %	10912	40	7857	50	8239	61	75	5510	49	43

In the process of social labor division and industrialization, migration of the population being a social and economic phenomenon, proves to be the index of the economic development on one hand and the factor affecting the structure of the economy, its social product and national income on the other.

Changes in the relative share of agriculture, industry and other activities in the structure of the national income earned were noted to be regular trends depicting the level of farmers' populated areas, i.e. the level of migration of the population. The decline in the share of agricultural population tended to decrease the share of agriculture in the national income earned on one hand and increase income per total and active farm household member on the other. Based on the above said the application of scientific and technological advances and labor productivity increase in agriculture tended to raise the parity of its national income in relation to the income earned in industry and other non-agricultural activities.

The share of agriculture and industry in the national income varied depending on the demographic community groups and the percentage of the agricultural population. These two major branches of economy were found to exhibit different relative shares in the structure of the national income according to demographic community groups (Table 5).

The share of other non-agricultural activities in the structure of the national income (civil engineering etc.) was substantial in the first demographic community group because it concerned urban settlements. The second community group involved mostly industrial communities.

The changes exhibited in the structure of the national income according to demographic community groups proved that migration trends of the population

had an impact on the changes in the share of agriculture and industry but also on the development of other economic activities, i.e. on the level of the social labor division and the diversification level achieved in economic activities.

Tab. 5. Share of major economic branches in the national income earned according to demographic community groups

Community groups according to the % of agricultural population (1991)	1974				1991			
	Industry	Agriculture	Industry and Agriculture	Other activities	Industry	Agriculture	Industry and Agriculture	Other activities
Total	30.2	26.3	56.5	43.5	36.7	17.8	54.5	45.5
- 5%	29.1	5.3	34.4	65.6	29.1	3.3	32.4	67.6
5.1-10.0	42.0	17.7	59.7	40.3	52.1	20.4	72.5	27.5
10.1-15.0	32.7	31.8	64.5	35.5	45.2	23.3	68.5	31.5
15.1-20.0	34.1	32.1	66.2	33.8	40.1	21.0	61.1	38.9
20.1-30.0	27.7	42.4	70.1	29.9	36.0	28.0	64.0	36.0
30.1-40.0	20.4	55.0	75.4	24.6	37.0	31.7	68.7	31.3
40.1-50.0	17.8	53.6	70.8	29.2	30.7	32.8	63.5	36.5
Over 50.0 %	6.1	71.9	78.0	22.0	16.7	49.4	61.1	38.9

Conclusion

Based on the results obtained the conclusion which tends to emerge is that migration trends of the population and labor force did not contribute to abandonment of agriculture on the whole. On the contrary, intensive decline of the number and relative share of agricultural population and labor force contributed to a qualitative change of social and economic conditions enhancing factors effecting further development based on scientific and technical progress and latest scientific advances.

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DOSTIGNUTI NIVO DEAGRARIZACIJE I NJEN UTICAJ NA POLJOPRIVREDNI RAZVOJ I STVARANJE NACIONALNOG DOHOTKA

-originalni naučni rad-

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Rezime

Deagrarizacija stanovništva u jednoj zemlji ispoljava se kao jedna od bitnih zakonitosti ukupnog privrednog i društveno-ekonomskog razvoja. U skladu sa ovom pojavom stvaraju se uslovi za poljoprivredni razvoj. Pod uticajem razvoja proizvodnih snaga, industrijalizacije i širenja društvene podele rada, odvija se stalni proces preraspodele radno sposobnog stanovništva i radne snage na različite privredne i vanprivredne delatnosti. Uporedo sa ovim procesom nastaju promene u socioekonomskoj strukturi stanovništva i radne snage u poljoprivredi.

U dosadašnjim prilazima ovoj problematici više su analizirani kratkoročni uticaji deagrarizacije stanovništva na razvojne tokove u poljoprivredi. Međutim nedovoljno je izučavano njeno društveno-ekonomsko značenje u okvirima razvojne politike, posebno na dugi rok. Nije sporno to, a što se inače često naglašava, da naša zemlja spada u grupu zemalja koje su imale najbrži proces deagrarizacije stanovništva u svetu. Ne ulazeći u celinu faktora razvoja poljoprivrede, pa i privrede, pre-naglašava se nepovoljan uticaj deagrarizacije. Ukazuje se da je "prekomeran" mehanički priliv stanovništva u nepoljoprivredne delatnosti na jednoj strani prouzrokovalo neproaktivno zapošljavanje u industriji i drugim neagrarnim delatnostima, dok su na drugoj napušteni značajni proizvodni, posebno prirodni resursi i u seoskim područjima. Ovakva shvatanja predstavljaju veliku teorijsku zabluđu, jer je poznato da su se prirodni uslovi veoma jednostrano i ekstezivno koristili upravo u okolnostima nerazvijene privrede i velike agrarne naseljenosti.