

**MEASURE THE RELATIONSHIP B BETWEEN THE DISTRIBUTION OF THE AGRICULTURAL LABOR FORCE AND INDICATORS OF ECONOMIC GROWTH IN IRAQ USING THE STYLE FACTOR ANALYSIS**

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**ABSTRACT:** *We discussed in this research the effect of the distribution of the agricultural labor force in Iraq by indicators of economic growth for the period (1986-2010) using (Factor Analysis) and through the use of statistical software SPSS The results of the analysis showed the presence of a strong and significant effect correlation coefficients, which gives a clear picture of the existence of inherent linear (multi-linear) between these independent variables and their impact in the approved variables that represented respectively (contribution of the agricultural gross domestic product to GDP (Y1), simple agricultural GDP growth rate (Y2), average per capita agricultural GDP (Y3), average per capita agricultural output growth rate (Y4), the productivity of agricultural worker (Y5). The research showed results that workers without a certificate had an impact in the high productivity of agricultural worker which was used as one of the indicators of economic growth, because the agricultural process in Iraq was built on the basis of gaining experience through practicing work, in addition to its dependence on the younger age groups as a result of failure of agricultural technologies that do not require from the agricultural worker to be College educated*

**KEYWORDS:** Factor Analysis, Productivity, Agricultural Labor, Public Sector, Distribution of Agricultural Labor Force, Ridge Regression

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**INTRODUCTION:**

For finding the effect of the distribution of the agricultural labor force in Iraq, economic growth indicators for the period (1986-2010) the factor analysis method has been used and through the use of statistical software SPSS got the results shown in the body of research.

I've been resorting the style factor analysis for being one of the statistical methods by which the diagnosis of relations between a wide range of variables in terms of a few of the fundamentals, as it can express the correlation matrix and in order to complete the factor analysis, and for the deltoid relationship analysis between the approved changes and variables illustrations that are relevant, the analysis of the matter, which requires an update to this analysis using generalized linear regression model, as it is an analysis of integral and essential part of the style factor analysis, especially in light of the Gog multiple linear correlations between the explanatory variables studied and appropriate standard models in such a regression analysis of the style of the character (Ridge Regression) as this is the style of the most appropriate models for estimating the subject landmarks in the case of a strong linear correlation between the explanatory variables researched.

Results of the analysis have shown the presence of a strong and significant effect, which gives a clear picture of the existence of inherent linear (multi-linear) between these variables and their impact in the approved variables that represent respectively (contribution of the agricultural gross domestic product to GDP (Y1), the rate of simple agricultural GDP growth (Y2), average per capita agricultural GDP (Y3), average per capita agricultural output growth rate (Y4), the productivity of agricultural worker (Y5).

**Research Hypothesis:** This research was built upon the following hypothesis the distribution of the agricultural labor force in Iraq in terms of age and degree of indicators affecting the structure of economic growth.

**Aim of the research:** The research's aim is the following

- Highlight the theoretical framework of factor analysis
- Analysis of the distribution of the agricultural labor force in Iraq, with the affects on the structure of economic growth.
- Diagnosis of variables that have the greatest influence economical growth indicators.

## FIRST: FACTOR ANALYSIS

### Concept

Many sciences and applications contain variables that are involved with each other to create different phenomena, and often the relationship between these variables is overlapping and complex, which makes it difficult to separate the effect of each of them in the approved variable, this case is called the multi-linear problem between independent variables.

The simple correlation coefficient can simply be a measure which shows the degree of relationship between two quantity variables, and the value is in the range  $(-1 < r < 1)$  can be calculated using the following formula:

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2} \sqrt{\sum (y_i - \bar{y})^2}} \quad \dots(3-1)$$

Whereas many theories involving the group variables associated with each group causal relationships are strong in most cases, particularly with regard to the economic aspect, so it can not adopt the simple correlation coefficient for the interpretation of the relationship between a numbers of variables, for two reasons. First, the large number of transactions, and second, the fact that correlation coefficients that measure the degree and nature of the relationship between two variables only and ignores the rest of the inter-relationships with other variables (Quraishi.2004. 41-48).

From here came the factor analysis method, which is one of the methods of statistical analysis by which the diagnosis of relationships between variables for interpretation and explanation, which is the best solution for data that are suffering from the problem of full multi-linear, it seeks to reduce the number of variables for the sake of studying it (P) to a smaller number of factors (K) returns a variation of those variables.

Factor analysis is known as a mathematical model, which shows the relationship between a wide range of variables in terms of a small numbers of key factors, and from which the

expression of the correlation matrix factors are that the number of columns (factors) is less than the number of ranks (variables), and each factor includes within it a certain number of relevant variables saturation moral whether carrying a positive or a negative, and explains each factor as a certain part of total variation in the data, and can label each factor depending on the combination of powerful and influential variables according to the study mechanism and target them (shuaa' for publishing and sciences. 2007. 615-617).

The credit in developing the style factor analysis to test the psychological standards, and psychologicals used it as a means of analyzing the results of IQ tests, as some specialists scientists began applying the social and educational studies in their studies, but the big advantage of this method came after World War II, specifically after the invention of the computer, as it has become more flexible and easier in terms of the application, and was relied upon in the various fields of science and its applications, such as medicine, agriculture, economy, and the geographical science of cities to explain the internal structure of the cities (describe areas within cities) was launched on the studies (Factorial Ecologies) using an area within the city as a point of watching while using housing variables and descriptive characteristics of the population (Anthasius and others.1977. 81-90).

### The Model of Factor Analysis

Suppose that there are many variables, and each variable, it can be expressed in terms of each variable factor, as in the following equation: (Jabri. 12-13).

$$X_j = a_{j1} F_1 + a_{j2} F_2 + \dots + a_{jL} F_L + U_j \quad \dots(3-2)$$

$$X_j = \sum_{L=1}^m a_{jL} F_L + U_j \quad \dots(3-3)$$

As:

$p$

The number of variables ( $j=1, 2, 3, \dots, p$ ) indicator variables

$m$

The number of common factors

( $L=1, 2, 3, \dots, m$ )

Factors Index ( $p > m$ )

( $a_{jL}$ )

Represents saturation (overload) and variable ( $j$ ) and ( $j=1, 2, 3, \dots, p$ ) factor Abstract ( $L$ ) called transactions matrix Chavat factors (Factor Loadings)

( $F_1, F_2, \dots, F_m$ )

Factors to be drawn from the solution model of factor analysis, and consists of all factors from a range of transactions represent saturation variable in that factor, and the number of these factors is less than the number of variables, and it is called (common factors), and the longer these factors hypothesis associated factors call it the nature of the variables that are the values of transactions over the big variables.

$U_j$

Representative of privacy variable  $(j)$  the composition of the phenomenon, so any amount of variation that is not explained by any factor other than common factors, but is associated with the behavior of the future of this variable and is expressed as the random variable.

In order to facilitate the interpretation of the implications of the global model analysis can be expressed in this format model matrices and as follows:

$$[X] = [A]_{(p \times m)} * F_{(m \times 1)} + U_{(p \times 1)} \quad \dots(3-4)$$

$$X_{(p \times 1)} = A_{(p \times m)} * F_{(m \times 1)} + U_{(p \times 1)} \quad \dots(3-5)$$

And that:

$X$  : Vector of random variables

$A$  : Flow factors matrix

$F$  : Vector of common factors

$U$  : Vector own random variable factors

### Ways to Solve the Model of Factor Analysis

There are several ways to solve the global model analysis including the following:

1. Principle Factor method
2. Maximum likelihood Method
3. Minor Method
4. Image Method

Will be addressed in this section briefly to Principal factor Method.

### Principal Factor Method (P.F.M): (Morrison. 1996. 263)

Involving this method to convert a set of linearly related variables  $(X_1, X_2, \dots, X_p)$  to a new set of main factors  $(F_1, F_2, \dots, F_m)$  in the form of compositions linear derived from the independent variables  $(X)$  to be replaced to be eligible for the interpretation of most of the total variance original values of the data, since these factors are orthogonal which are not connected with each other, It can conduct analysis of principal factors using a matrix of common variation and contrast when all of the Independent variables  $(X)$  are similar to

independent variables, while using the links matrix when the independent variables ( $X$ ) are of different measurement units.

The first factor extracted  $F_1$  is the factor that explains the larger value of total variation, followed in importance second factor  $F_2$  that explains the ratio is less than its predecessor (Group I), and so for the remaining factors, while access to less factors explanation for the discrepancy is the last factor  $F_m$  (Alnhafea. 2013.180)

The analysis also takes in accordance with the method of the principle factors only with basal values that are larger than the one being the most prominent of importance Building model and interpret variance.

Factorial model can be formulated in accordance with the method of the main factors as follows:

$$X_j = a_{j1} F_1 + a_{j2} F_2 + \dots + a_{jL} F_L + \dots + a_{jm} F_m \quad \dots(3-6)$$

And that:

Represents the contribution factor  $L$  of the value of the prevalence of the variable  $X_j$   
( $L=1,2,\dots,m$ )

### **The Mechanism of Identifying the Factors and Rotate Axes:**

In 1960 (Kaiser) had put scientific foundations for the number necessary to demonstrate the relationship between the variables factors, he said (Kaiser) that the number of factors is equal to the number of basal values that value is greater than the one calculated from the original correlation matrix.

The idea of rotating axes have emerged in order to keep non-essential factors and highlight the role of their counterparts from the necessary factors, and this idea is built to move the axes of the factors to the coordinates of site variables, through two methods: (Al- alaq. 1982. 73-89)

1. Orthogonal Rotation: features that keeps factors independent from each other.
2. (Oblique Rotation): does not require that the factors to be independent, as it passes axes of these factors from the point of origin through the centre of variables groups, so they do not form a right angle.

### **Tests for the Significance of the Loadings**

Researchers (Banks and Burt) suggested an approach to test the moral loads or overloads of factors, as it relied on the standard error of loads in its statement, if we assume that the first factor  $a_{j1}$  loads is greater or equal to the standard error for uploads same factor can be counted, as is the standard error calculation for the factor according to the following formula. Koutsoyiannis A. 1979. 238-256):

$$S_{a_j} = S_{r_{x_i y_i}} \sqrt{\frac{P}{P+1-t}} \quad \dots(3-7)$$

As:

$S_{r_{x_i y_i}}$  : Tabular value of moral correlation coefficients

$P$  :The number of variables in the group

$t$  : ORDER of factors in the extraction process

In order to complete the factor analysis and for the deltoid relationship between the dependent variable analysis ( $Y_i, i = 1, 2, 3, 4, 5$ ) and the illustration variables ( $X_j, j = 1, 2, \dots, 15$ ) that are relevant determined by factor analysis, it requires an update of this analysis, used in the model year, linear regression, this analysis is considered an integral and essential part of the factor analysis method, especially in the presence of linear links between multiple explanatory variables studied and appropriate standard models in such a course is the (Ridge Regression) as this method is considered of the most appropriate models for estimating subject landmarks in case of a strong linear correlation between the explanatory variables studied in the relationship (Pasha.2004.97-106).

## **SECOND: ANALYSIS OF THE DISTRIBUTION OF THE AGRICULTURAL LABOR FORCE IN IRAQ, USING THE STYLE FACTOR ANALYSIS**

In order to investigate the effect of the distribution of the agricultural labor force in Iraq, economic growth indicators for the period (1986-2010) has been using the factor analysis method and through the use of statistical program SPSS got the results shown in the search.

Data that has been relied upon is from the Central Bureau of Statistics and Information Technology reports, added the estimated data for the period (2003-2010) of the lack of the necessary real data for this period, as we dealt with aggregate data that were obtained from the Department of the operating policies of the Ministry of Planning and Cooperation Development of that period, classified by sex and age of scientific and environmental status, included data on (15) independent variable ( $X_j$ ) and (5) dependent variables ( $Y_i$ ) have been specified as follows:

### **Dependent Variables Characterization**

$Y_1$ :Represents the output of agriculture sector to GDP

$Y_2$ :Growth rate represents the output of the agricultural sector

$Y_3$ :Represents the average per capita output of the agricultural sector

$Y_4$ :Represents the per capita growth rate of output in the agricultural sector

$Y_5$ : Represents the productivity of workers in the agricultural sector

### The Independent Variables Characterization

$X_1$ : Represent working men in the agricultural sector

$X_2$ : Represents working women in the agricultural sector

$X_3$ : Workers without a degree in agricultural sector

$X_4$ : Workers with the certificate in elementary and middle school agricultural sector

$X_5$ : Engaged in a campaign of junior certificate and diploma in the agricultural sector

$X_6$ : Workers with the bachelor degree and Higher Diploma in agriculture degree

$X_7$ : Workers from graduate degree holders in the agricultural sector

$X_8$ : Workers aged below 20 years in the agricultural sector

$X_9$ : Workers of 21-30 year olds in the agricultural sector

$X_{10}$ : Workers of 31-40 year olds in the agricultural sector

$X_{11}$ : Workers of 41-50 year olds in the agricultural sector

$X_{12}$ : Workers of 51-60 year olds in the agricultural sector

$X_{13}$ : Workers 60 years and older age group in the agricultural sector

$X_{14}$ : Represents workers in the agricultural public sector

$X_{15}$ : Represents workers in the agricultural private sector

### The results of the factorial analysis of the function of the agricultural sector growth indicators for the period (1986-2010)

The results of the factor analysis have shown through the calculation of simple correlation coefficients matrix of Pearson between the independent variables under (research) and set in the table (1) and having relationships are very strong and correlation statistically significant differences between most of these variables in the agricultural sector, its example the relationship between the variable ( $X_1$ ) that represents the (distribution of workers from males in the countryside) and variable ( $X_{14}$ ) Representative of workers in the public sector in the countryside, where it reached the simple correlation coefficient (0.98), as variable ( $X_1$ ) the

most prominent variables high correlation with other independent variables in this sector, as also note the presence of a strong and significant effect other correlation coefficients which gives a clear picture of the existence of inherent linear (multi-linear) between these variables and their impact in the dependent variables that represent respectively (contribution of the agricultural gross domestic product (GDP)  $Y_1$ , the simple agricultural GDP growth rate ( $Y_2$ ), the average per capita agricultural GDP ( $Y_3$ ), growth rate Average per capita agricultural output ( $Y_4$ ), the productivity of agricultural work ( $Y_5$ ).

For the purpose of the main independent variables statement in its impact and contribution to the agricultural sector growth, statistical analysis has been used over the way (Principal factor Method), which is one of the most important methods of factor analysis, were extracted two main factors for the indicators growth of this sector as prescribed by table (2) for the period of 1986 - 2010, as she was the basal values of these larger than the right one factor, and despite the fact that each worker explains the different proportions of the variance, but it is important in a statement independent variables contributing to the agricultural sector growth, if we observed the fourth column of the table (2) we find that the components extracts were able to be construed as a percentage of (86.63%) of the total variance of the variables, with the remainder of the discrepancies of (13.37%) they represent unexplained variations attributable to chance or volatility in the data.

**Table (2) basal values and the percentage factor of the total variance and contrast cumulative factor variables contrast to the agricultural sector.**

cumulative variance	contrast ratio factor%	basal values	Factors (components)
74.693	74.693	11.204	first
86.637	11.944	1.792	Second

*Source: The table has been prepared based on the results of the electronic computer*

For the purpose of the statement involved variables in the installation of the main factors of the individual must note how the saturation of each independent variable of independent variables referred to in the example characterization within each factor (each independent loaded variable within a factor) as been tested moral loaded factors matrix retained the factors set in the table (3) the use of the standard error of loads each factor, according to equation (7-3) referred to previously

$$s_{q1} = 0.635 \sqrt{\frac{15}{15+1-1}} = 0.635$$

$$s_{q2} = 0.635 \sqrt{\frac{15}{15+1-2}} = 0.657$$

And be loading morally independent component variable when it increases or equal to its value in the Working Group, the standard error value for that factor, on this basis of factors, according to the matrix retained factors specific variables of the agricultural sector, described in the agenda will be the interpretation of each factor (3) as follows:



**Table (3) Matrix own variables agricultural sector factors**

تحميلات العوامل (المكونات)		variables
Second	First	
0.099	0.956	$X_1$
0.337	0.880	$X_2$
0.108	0.952	$X_3$
0.190	0.963	$X_4$
0.162	0.972	$X_5$
0.178	0.968	$X_6$
0.319	0.803	$X_7$
0.815	0.256	$X_8$
0.449	0.845	$X_9$
0.155	0.912	$X_{10}$
-0.111	0.969	$X_{11}$
-0.131	0.967	$X_{12}$
-0.877	0.105	$X_{13}$
0.132	0.975	$X_{14}$
0.227	-0.640	$X_{15}$

Source: The table has been prepared based on the results of the electronic computer

### THE FIRST FACTOR

This factor form biased and of great importance in influencing the economic growth of the agricultural sector indicators, as could the majority of variation explains the growth rates of agricultural production, as interpreted by itself (74.69%) of the total variance table (2) (that a large proportion if we compare it later to what was interpreted by second factor) has contained the largest number of direct impact of independent variables, and through factor loads that described this factor in the table (3) note the saturation of moral values is significantly higher than the variables ( $X_{14}, X_{12}, X_{11}, X_{10}, X_9, X_7, X_6, X_5, X_4, X_3, X_2, X_1$ ) that represent as we explained in the example characterization of the distribution of workers in the countryside (male, female, without a degree, primary, middle, and lower secondary diploma, Bachelor Higher Diploma, graduate certificates, then according to the ages of 21-30, 31-40, 41-50, 51-60 and employees in the public sector), amounting to saturated values (0.956, 0.880, 0.952, 0.963, 0.972, 0.968, 0.803, 0.845, 0.912, 0.969, 0.967, 0.975), respectively, and also noted the existence of the value ( $X_{15}$ ) of the saturation of moral other special variable that represents the workers own the agricultural sector, in terms of (0.640).

So this factor could be called self-qualified workers factor in the agricultural sector, as it formed a qualification variables and age groups basic in construction, as well as the direct effect of the number of traders who working in this sector of both sexes with a prominent proportional effect for those working in the public sector from either sexes and the weakness of the role of the private sector within the agricultural activity.

## THE SECOND FACTOR

This factor explained (11.94%) of total variation also refers to the Table (2) It is a small percentage compared to what was interpreted by Group I, and through loads of this factor set forth in the table (3) the presence of two effects juridical is present in very high degree of variables that are (employees under 20 years and the same number of greater than 60 years) ( $X_{13}, X_8$ ), reaching the saturation of the two values (0.815, 0.877), respectively, while no significant saturation appearance of the other variables.

this factor might be called a factor of age, where the direct impact of the two age groups under twenty years and older than sixty years, where young boys energies as well as the workers experience play a key role and that tended ratio slightly in favor of the second category (workers experience), as was her relatively larger effect in it.

## THIRD: ANALYSIS REGRESSION FOR THE DISTRIBUTION OF THE AGRICULTURAL LABOR FORCE AND INDICATORS OF ECONOMIC GROWTH IN IRAQ

This axis aims statement impact of the independent variables that have been previously addressed in the factor analysis of the agricultural sector in the variables which have been classified as dependent variables ( $Y_1, Y_2, Y_3, Y_4, Y_5$ ) as an integral and essential to the factor analysis to clarify the nature of the deltoid relationship between these variables and the agriculture sector in Iraq.

Through a statement that the variables are selected best Regression model could reflect the best representation of the relationship between the independent variables with one dependent variables, the trade-off process through the moral test example the first place, and then the trade-off between moral models through the valu of The coefficient of determination  $R^2$ , and then it will assess and interpret the best model parameters.

### The analysis indicators of agricultural sector development (1986-2010)

After that we noticed through factor analysis over the presence of strong relationships through the correlation matrix and shown in Table (1), as this is a clear indication of the existence of inherent linear between these variables, and on this basis will be inflation Diversity factor calculation (VIF), which is the higher value any variable rate that the existence of the impact of the problem of multi-linear.

Using a statistical program SPSS was obtained inflation Diversity factor values (VIF) and set in the table (4), which indicates clearly to very large values of excellence (10) for most of the

independent variables, which requires to use the model of (Ridge Regression) to estimate of the proposed five models parameters (each variable is supported with all the independent variables) to indicate the best model to describe the relationship of the indicators of the agricultural sector growth

And through the use of Ridge Regression were estimated five proposed regression models parameters referred to as variables are supported, the value of a  $(F)$  test showed the four private variables models,  $(Y_5, Y_3, Y_2, Y_1)$  while were not testing the value of the model remainder  $(Y_4)$  of significance also shows that the values of (Sig) interview to  $(F)$  test in a table (4). With regard to the calculation of multiple correlation coefficient  $(R)$  for each model reached for variables approved (0.89, 0.79, 0.90, 0.81, 0.92), respectively, most of which are great to describe the relationship in general between all supported and other independent variables variable.

As fo  $(R^2)$  of the five models proposed, statistical analysis showed that the results of the analysis has reached (0.79, 0.63, 0.82, 0.66, 0.86), respectively, and thus it can be concluded that the five model  $(Y_5)$  with other independent variables) is the best models proposed in a statement relationship growth indicators for the agricultural sector, and then both models for dependent variables  $(Y_3)$  and  $(Y_1)$ .

The main value of  $(R^2)$  for the fifth model that regression equation through independent variables explain what percentage of (86%) from the change in  $(Y_5)$  which representing agricultural worker productivity and (14%) of those changes and deviations are due to random error.

As a result of preference model five, as it shows this model regression relationship  $(Y_5)$  now is the variable that represents the productivity of agricultural worker, has been estimating its parameters  $(\beta)$  as in the table (5) that they were the parameters of the independent variables  $(X_{14}, X_{11}, X_8, X_7, X_5, X_4, X_3)$  of significant statistical very high reflect relationship between  $(Y_5)$  which represents the productivity of agricultural worker and the independent variables.

The parameters of the independent variables  $(X_{15}, X_6)$  with a negative and statistically significant inverse relation between  $(Y_5)$  which represents the productivity of agricultural worker and the independent variables are set forth above, while the remaining independent variables landmarks were not of statistical significance, as shown in the table (5)

The value of the estimated parameter  $(\beta_3)$  of workers without a certificate demonstrates that increase their numbers affect the direction of raising worker productivity rate, and this disagrees with the economic logic, which refers to the importance of educational attainment or level of education in raising productivity rates factor. We can say that agricultural operations in Iraq are built on the basis of gain experience through practice work, more than being based on the need for a workforce characterized by possessing a certain level of education, and the

failure of agricultural technologies used, does not require for agricultural worker, so the workers without a degree will have impact on productivity rising agricultural worker.

Perhaps the estimated value of the parameter  $(\beta_7)$  in the results from (1986-2010) of workers holding advanced degrees cope with the economical logic as to increase their numbers have had a positive productivity factor, and this of course establishes the importance of attention to raising the educational level of workers to agricultural activity.

The ability of workers parameters shows according to age group  $(\beta_8)$ ,  $(\beta_{11})$  increase the number of workers in the age group below 20 years as well as the age group 41-50 years, will work toward the high productivity of agricultural worker rate, an indication that the agricultural process in Iraq based on gain experience through practice work, as well as relying on the younger age groups, especially since agriculture is dependent on agricultural technologies is relatively sophisticated.

**Table (5) the best specimen of the agriculture sector with the values of the parameters tested**

variable	$\beta$	$t$	Sig
$X_1$	-0.354	-0.138	0.893
$X_2$	-0.502	-0.429	0.678
$X_3$	5.084	3.912	0.000
$X_4$	3.771	5.616	0.000
$X_5$	3.122	3.043	0.010
$X_6$	-5.709	-2.705	0.024
$X_7$	4.978	7.126	0.005
$X_8$	1.611	5.128	0.020
$X_9$	0.398	0.245	0.812
$X_{10}$	-2.088	-0.543	0.601
$X_{11}$	2.372	8.417	.000
$X_{12}$	-0.679	-0.320	0.757
$X_{13}$	-0.351	-0.694	0.505
$X_{14}$	6.002	9.211	0.004
$X_{15}$	-0.835	-3.313	0.022

Source: The table data is calculated based on the results of the electronic computer

## CONCLUSIONS

1. Factor analysis showed the presence of a very strong and statistically significant correlations between most of the variables examined, the agricultural sector, has a variable form of the work of those variables most prominent male high-power link with the rest of the independent variables.

2. two main factors were drawn for the growth of the agriculture sector indicators were basal values greater than the right one, where they were able to be construed as a percentage of (86.63%) of the total of the variance of the variables.
3. The first factor form a distinct and of great importance in influencing indicators of growth of the economy in the agricultural sector has been called self-qualification for two years in the agriculture sector by a factor.
4. The second factor that explained the accounting designation (11.94%) of total variation by a factor of the age group where the direct impact of the two age groups under twenty years and greater than sixty years, where he represented the first young boys energies while other age group represented workers experience that can be can play a key role.
5. Showed the value of the coefficient of determination results of the fifth paradigm that the regression equation through independent variables explain what percentage of (86%) of the variable changes taking place in the (Y5), which represents the productivity of agricultural worker.
6. Agricultural operations in Iraq are built on the basis of gain experience through practice work more than being based on the need for a workforce characterized by possessing a certain level of education so it was for workers without a certificate after a rise in the productivity of agricultural worker.

#### **RECOMMENDATIONS:**

1. Due to the difficulties that we faced preparing Find embodied scarcity distribution of the employed data between Iraq and the economy sectors, especially after the year 2003 it is important to adopt the Ministry of Planning and Development Cooperation project to build a database to serve as Information Bank classifies workers in terms of gender and educational attainment and age groups, the environment and jobs in addition to classify them according to public and private sectors, as the availability of such a statistics will allow specialists from planners, as well as scholars analyze the reality of the labor market that are required of employees, according to classifications to see any of those categories, which is its greatest influence in the growth of the sector indices independent variables to be strengthened.
2. Based on what was the results of the factorial analysis using the statistical analysis over the way the basic components for the function of the agricultural sector for the period (1986-2010) of the priority distribution of the employed who are found to have an impact in the growth of this sector has been for those who work in agriculture in the public sector, followed by those who have collected scientific preparatory Diploma, followed by 41-50 year age groups, and for those with a bachelor's degree and higher diploma and age groups 51-60 years and for males, and so as variables came for the employees, so it is necessary to draw attention the employed with educational attainment preparatory diploma and bachelor especially for Agricultural terms of reference, and interest in the agricultural public sector, which shows the results of the research that has a profound impact on the growth of this sector, compared to the negative impact the private sector

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