

A RESEARCH ON THE FACTORS AFFECTING NUMERACY AND LITERARY SUCCESS LEVELS OF FACULTY OF ECONOMICS STUDENTS WITH CORRESPONDENCE ANALYSIS METHOD

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SUMMARY

In our study based on Correspondence Analysis: it is aimed “determination of interaction structure between various categories by comparing profiles showing success situations of students in common lessons of numeric and literary characteristic in various departments of Faculty of Economics”. Shortly, it is studied whether similar or different profiles are formed in success levels in numeric and literary lessons when departments are taken into consideration.

It is tried to present technique used in first chapter.

During this study information collected from the files of 285 students of various departments carefully selected by taking numbers of students in departments into consideration are taken as a basis. Important findings are transferred in chapter 2 by applying Chi-square; Correspondence; Multivariate Correspondence and Homogeneity Analyses and a general evaluation is done in result chapter.

ÖZET

Correspondence Analizini esas alan çalışmamızda: “İktisat Fakültesi’nin çeşitli bölümlerinde, sayısal ve sözel nitelikli ortak derslerde öğrencilerin başarı durumlarını gösteren profilleri karşılaştırarak, çeşitli kategoriler arasındaki etkileşim yapısının belirlenmesi” amaçlanmaktadır. Kısacası, bölümler dikkate alındığında sayısal ve sözel derslerdeki başarı düzeylerinin benzer profiller mi, yoksa farklı profiller mi oluşturduğu araştırılmıştır.

Birinci bölümde, kullanılan teknik kısaca tanıtılmaya çalışılmıştır.

Çalışmada, İktisat Fakültesi'nin çeşitli bölümlerinden, bölüm öğrenci sayıları dikkate alınarak seçilen 285 öğrencinin dosyalarından derlenen bilgiler esas alındı. Ki-kare; Benzerlik (Correspondence); Çok değişkenli Benzerlik ve Homojenlik analizleri uygulanarak önemli bulgular bölüm 2'de aktarıldı ve sonuç bölümünde genel değerlendirme yapıldı.

INTRODUCTION

Maximization of profit constitutes an important point during decision process. Undoubtedly, flexible decision process constitutes the secret of success for the increase of profit.

Faculty of Economics accepted term lessons and relative evaluation system since 1999-2000. Also some departments have been closed for reconstruction studies of Istanbul University. Some departments accepting students with high points such as International Relations and Business Administration also have been closed. It will be useful to analyze existing situation without losing any time to obtain expected profit from these changes. It is known that new system will give first graduates in the year 2003. Consequently, trying to analyze system after years will cause also a waste of time. Some problems may arise in obtaining healthy data of old system. For this objective we tried to study, with the assistance of correspondence analysis, qualitative and quantitative factors affecting success situations of students in numeracy and literary lessons in some departments of Faculty of Economics. Technical structure of the research is based on the monography on the topic of correspondence analysis realized in 1999.

At the end of analyses applied on 40 variables considered we obtained 52 models. Our main purpose here is not to explain method but to present the results of research. Besides, the outputs of analyses are not given not to break the completeness of the research; to put forth the findings in a pure, comprehensible and concise manner.

1. Correspondence Method and Its Basic Concepts

Correspondence analysis is one of the dimension reduction methods. Shortly it is the placement of units and categories in multi dimension space to reach a simpler and comprehensible structure. Consideration of intervals

between units will reveal similar categories which means homogeneity.¹ For this purpose it may be used as Q analysis to support other grouping techniques or to control their results.²

Starting from data matrix and using horizontal or vertical profiles, analyses may be carried out according to individuals – categories and variables. Another peculiarity of method is *being convenient for mixed (qualitative and quantitative) data*; owing to these peculiarities it has found a broad application area. Correspondence analysis is a method giving possibility to overcome many problems originating from data structure and also comes before us as a method assisting to - assemble data in group – to obtain homogeneous sub-groups by revealing the similarities or differences in group or groups considered. For that peculiarity, it can be used to observe the structure of homogeneity of data not appropriate to hypothesis, when it is used under proper conditions and very carefully. These peculiarities of method have been effective to prefer in this research.

Method, categorize variables starting with first data matrix, puts individuals to cells relevant to dummy variables. This is exceptional form matrix. In the subsequent phase contingency tables are formed. Departing from the table proportional frequencies are calculated with the following formula

$$f_{ij} = k_{ij}k^j \quad (1)$$

$$f_i = k_i k^j \quad (2)$$

$$f_j = k_j k^i \quad (3)$$

and Line profile

$$f_{(j/i)} = f_j = f_{ij} f_i^{-1} = k_{ij} k^j \quad (4)$$

and Column profile

$$f_{(i/j)} = f_i = f_{ij} f_j^{-1} = k_{ij} k^j \quad (5)$$

are calculated with formula (4) and (5) respectively. Marginal distributions of lines and columns are named Mass. If diagonal matrices are D_i and D_j having f_i and f_j on diags, eigen values of diagan matrix

$$T = X' D_i X \quad (6)$$

¹ Blasius, Jörk, Greenarce, Michael, "Visualization of Categorical Data", Academic Press, San Diego, 1998, pp. 107-122.

² Anderson, Erling, B., "The Statistical Analysis of Categorical Data", Springer Verlag, Berlin, 1990, p. 362.

being λ_i and eigen vectors being U_{aj} for zero, line coordinates are are

$$\Psi_{ai} = \sum_{j=1}^P (f_j^i f_j^{-1/2} - f_j^{1/2}) U_{aj} \quad (7)$$

Also, eigen values of

$$S = X' D_f X' \quad (8)$$

matrix being λ_j and eigen vectors being V_{aj} , column coordinates are calculated with the following formula³

$$\Phi_{aj} = \sum_{i=1}^m (f_i^j f_i^{-1/2} - f_i^{1/2}) V_{aj} \quad (9)$$

Dimension coefficient, an important concept in Correspondence analysis, is determined with Inertia number. For any $d=D$ total inertia is equal to the squares of singular values μ_d^2 . The contribution of any dimension to explanation is calculated with

$$\mu_d^2 / \sum_{d=1}^D \mu_d^2 \quad (10)$$

This is also named as quality of explanation.⁴

Another important point in the analyses is normalization which is performed to increase homogeneity. Operation is done by using Q data matrix as follows⁵

$$D = \text{diag}(Q'Q) \quad (11)$$

$$Y'DY = 1 \quad \text{or} \quad X'X=1 ; X'X=n \quad (12)$$

2. General Information on the Research

Information on the aim, scope, method and variables of the research are given in this part.

2.1. The aim and scope of the research

As we have tried to state at the beginning of our study, in our study that is based on Correspondence Analysis, one of dimension reduction methods, aims to

³ Jambu, Michel, "Exploratory Multivariate Analysis", Academic Press, Boston, 1991, pp. 241-294.

⁴ Jobson, J.D., "Applied Multivariate Data Analysis II", Springer Verlag, New York, 1992, pp. 343-344.

⁵ Gifi, Albert, "Nonlinear Multivariate Analysis", John Wiley & Sons, Chichester, 1990, pp. 81-148.

“determine reciprocal influence structure between various categories, by making comparisons of profiles showing success situations of students, in different departments of Faculty of Economics in common lessons with numeric and literary characteristic”. Besides it is aimed to determine what kind of a correlation structure exists between success situation and their educational background, the regions from where they come, their success in SST (Student Selection Tests) and their different characteristics. Shortly, if departments are considered carefully, it is tried to determine whether their level of success in numeric and literary lessons are forming similar profiles or different ones. While realizing these operations final examinations and make-up examinations are evaluated separately.

2.2. The method and variables of research

Data to be used in the research are derived from between the files of final students of Faculty of Economics, with the help of *random numbers* table by taking *numbers of students in departments* into consideration. Not to show, sample structure for lessons and departments, any *difference with respect to the years from the point of view of qualities* when studying point distribution; success points in *final and make-up examination of common lessons that are chosen* from between *the lessons of first, second and third class* are determined. While selecting sample files *student lists of academic year 1998 – 1999*. If the repeating students were successful in these lessons during preceding years, this situation is stated separately with zero code and these students are not taken into account. Also, as the note of any student considered unsuccessful for missing any examination that has to be taken, being *null (zero)* they are included in the *first group of point distribution (0-16.6)*.

While *selecting departments* to be included in the study departments where *presently education is continuing in final classes*, that are started education in the year 1995 and earlier; where education is in Turkish, are *taken essential*. But after obtaining data in April 1999, “International Relations” and “Business Administration” departments are closed in the framework of reconstruction in may. But it is announced that lessons would continue in some departments until the graduation of present students. From the point of view to *present existing situation* these departments are **not excluded** from the research. *Foreign students* are kept out of evaluation when determining *sample magnitudes*.

The cities where students have *taken high school educations*, are classified as Istanbul; big cities other than Istanbul where university exists and other regions. Also *types of high schools* from where students had come and *departments*

in high school also are determined. Also we tried to learn whether students taking *student loan* or not and whether they stay in the **dormitory**. Finally the points taken by students in second rank tests (SST) also are determined and transformed in a standard form and included in the study.

As numbers of students of departments are considered, it is determined to study totally with **285 units**, as sample magnitude being bigger than 30 units for each department. In this manner the success in different classes for same *units* are considered and for example when success of lessons in different classes, *it is prevented to transform a heterogeneous for the view of characteristics*. Nevertheless a real limitation in sample magnitudes has been possible. *Not any quotation is performed* on the matters such as sex, age, region and alike. If it only *final students are taken into consideration* sampling rate is being about 30%. If *all students in these departments* are thought sampling rate is about 8.4%. Number of students for each department and sample magnitudes are shown in the following table.

Table 1. Number of Turkish Students in Departments and Sample Magnitudes

Departments	Number of Students	Percent %	Number of Sample
Economics	1101	32.66	93
Public Finance	561	16.64	47
Econometrics	409	12.13	35
International	420	12.45	35
Labor Eco.	408	12.10	35
Business Ad.	472	14.02	40
TOTAL	3371	100.00	285

One of the most important limitations of research also is originated from limited presentation possibilities of SPSS 7.5 program. To overcome that difficulty before all else simple similarity analyses and later similarity analyses with variables are performed after evaluation of results obtained.

It is possible to perform many different analyses for the same data set in the direction of various aims. But this is outside of the aim of this study.

Departing from data group, a preliminary study is done to make the analyses more evident and to determine its limits. It is determined with Chi-Square

Independence Test, whether some auxiliary variables are have effect on success, such as staying in the dormitory, having student loan, the region where high school that student graduated is situated, type of high school, high school program that student graduated. points in student selection tests.

Variables of research and symbols of these and related categories are shown in Table 2.

Table 2. Codes of Variables and Categories

Name of Variable	Code	Variable Categories
Departments	Blm	i-economics m-Pub. finance e-econometrics u-international c-labor b-business adm.
Sex	Cns	e-male k-female
Year Repeating	Sk	1-yes 2-no 3-horizontal transition
High School Region	Lb	1-Istanbul 2-Big cities 3-Other
High School Type	Ltr	1) Yb-Foreign 2) To-Turkish private 3) A-Anatolia 4) F-Science 5) N-Normal 6) M-Trade Sc.
High School Programe	Lp	Es-Literary-social F-Science Milk-Trade Tm-Turkish-Matematics D-Other
Turkish Mahtematics Point	Ptm	
Social Point	Ps	
Turkish Social Point	Pts	
Staying in Dormitory	Yu	e-yes h-no
Taking Student Loan	Kr	e-yes h-no
Economics Final	Fi	1-null 2-very poor 3-poor 4-fair 5-good 6-very good
Business Adm. Final	Fisl	
Accounting Final	Fmuh	
Mathematics Final	Fmat	
Economics Make-up	Bik	

Business Adm. Make-up	Bisl	
Accounting Make-up	Bmuh	
Mathematics Make-up	Bmat	
Statistis Final	Fista	
Micro Economics Final	Fmik	
Macro Economics Final	Fmak	
Quantitative Economics Final	Fkan	
Public Finance Final	Fmly	
Statistics Make-up	Bista	
Micro Economiks Make-up	Bmik	
Macro Economiks Make-up	Bmak	
Quantitative Econ. Make-up	Bkan	
Public Finance Make-up	Bmly	
Mathematial Econ.Final	Fmi	
Mathematial Econ.Make-up	Bmi	
Applied Statistics Final	Fui	
Applied Statistics Make-up	Bui	
Monetary Final	Fpr	
Monetary Make-up	Bpr	
Econometrics Final	Fekm	
Econometrics Make-up	Bekm	
Standard Social Point	Sps	Min: -3.55; Max:1.94
Standard T.M. Point	Sptm	Min: -5.51; Max: 2.75
Standard T.S. Point	Spts	Min: -2.55; Max: 1.73
Classified Spts (missing included)	Yyspts	Standard points are divided into 5 classes as class intervals to be 1
Classified Sps (missing included)	Yysps	Standard points are divided into 6 classes as class intervals to be 1
Classified Sptm (missing included)	Yyysptm	Totally 7 classes are formed as upper limit of first class being (-3), first 3 classes unified by expressing with code 1 and value interval of other classes being one
Classified Sps	Ysps	Class interv.1 unit, 6 classes
Classified Spts	Yspts	Class interv.1 unit, 6 classes
Classified Sptm	Ysptm	8 classes are formed as upper limit of first class being (-4) other values as class interval being 1 unit

3. Findings of Research

Findings obtained as a result of Chi-Square analyses are summarized as follows:

Success of student is generally related closely to SST tests that mean numeric and literary capacity. Type of high school and department (division) in high school graduated and TS point, that means literary capability, is gaining importance especially for the lessons of economics and business Administration. Also for the same group of lessons, it is understood that secondary factors such as staying in dormitory and having student loan are being also effective. But the affect of these last two factors may have no relation to income or psychological situation, but may be sourced of natures of lessons. If these two factors would have income or psychological affects that relation would expose more prevalently; whereas it is exposed here in the lessons of economics, business administration, public finance and accounting, and generally in make-up examinations. If that's the case this relation may be connected more to students' being or not in school environment in Istanbul.

One of the most important points as for me that it is seen that success has no relation to sex in general.

Results of correspondence analysis:

When final points of Economics are studied although maximum dimension size is five, departing from principle of inertia of dimensions rate to total inertia according to its contribution (contribution rate $> 1/p$) and magnitude of total explanation rate ($2/3$) exceeds determined rates, for explanation rate of two dimensions is 0.856 analysis is realized in two dimensions. When line profiles are taken into consideration in two dimensional analysis: It is tried to estimate the dimension where each department will take place by considering contributions of dimensions to the inertia of line points. It is seen that first dimension makes higher contribution to *International and Economics departments*, second dimension makes higher contribution to the others. When line and column points are studied together it is understood that International Department is pertaining to good (i), Economics Department to very poor (cz); as for in second dimension Econometrics Department is pertaining to fair (o), Public Finance Department to fair and poor (z), Labor and Business Administration Departments to null (b) categories. For lesson of Economics not any discrimination realized between numeric weighed or literary weighed departments.

Make-up examinations of Economics are studied in two dimensions. Contribution rate of two dimensions to explanation of total inertia is 0.874.

Contributions to total inertia shows us that explanation is adequate. According to contributions of dimensions to inertia of line points, Economics Department (ik), Labor Department (c), Business Adm. Department (iş) and Econometrics Department (ekm) is taking place in first dimension; Public Finance Department (m), International Department (u) in second dimension. But it is possible to say that International Department has some importance also for second dimension partly. If the graph related to line and column coordinates are studied it is understood that Labor and Business Adm. Departments have positive coordinates and are related to good and null groups; Econometrics and Economics Departments to fair, poor and very poor groups; International and Public Finance Departments to poor, fair, null and good point groups. Also as a result of examinations not any discrimination of numeric or literary contents department is realized. Besides successful departments show difference in final and make-up examinations.

Final points of Mathematics are analyzed three-dimensionally. Contribution rate of dimensions to total inertia explanation is 0.984. Economics, Econometrics, International and Business Adm. Departments are taking place in the first dimension; Public Finance in second dimension; Labor Department in third dimension. Public Finance Department is pertaining to null, good and very good groups; Labor Department to null and fair groups; International Department to good; Business Adm. Department to fair and good; Economy and Econometrics Departments to very poor, poor and fair point groups. *Public Finance, International and Business Administration* departments are successful ones in final examinations of Mathematics. Students of departments with numeric contents are not showing expected success such as mathematics (1.st class), statistics (2.nd class), econometrics (3.rd class). But Departments accepting students with high TM points such as Business Adm. and International are successful.

Make-up points of Mathematics are taken up in two dimensions. Contribution rates of dimensions to explanation of total inertia is calculated as 0.947. International and Business Departments are seen in second dimension, other departments in first dimension. Business is pertaining to good point group; International to fair and null. Public Finance Department which was previously successful, is pertaining to null and fair point group, this means there exists a decline in points. Labor Department is pertaining to good and null point groups; Economics Department to null and fair; Econometrics Department to very poor and fair point groups. Shortly, it is understood that while success of Business Adm. Department is continuing the situation of Labor Department is going to develop.

Accounting lesson final points are analyzed three-dimensionally. Contribution rates of dimensions to explanation of total inertia is determined as 0.953. Labor

and Business Adm. Departments are taking place in first dimension; Economics Department in second dimension; International in third dimension. International Department is seen to be pertaining to Very poor (2), poor (3), null (1) and partly fair (4) point groups; Economics Department to fair (4) and good (5) point groups; Public Finance Department to null (1) and very poor (2) point groups; Labor Department to null (1) point group; Business Adm. and Econometrics to fair(4) and good (5) point groups.

Accounting lesson make-up points are analyzed in two dimensions, it means that difference between departments is partly decreased and similarity is increased. Contribution rates of dimensions to explanation of total inertia is determined as 0.82. Econometrics, International and Labor Departments are taking place in first dimension; Economics, Public Finance and Business Adm. Departments in second dimension. Econometrics Department is pertaining to fair, good and null point groups; Economics Department to good and null point groups; Labor very poor and poor point groups; Public Finance Department to null and poor point groups; International Department fair and empty point groups; Business Adm. Department to good, null and partly fair point groups.

Business Administration lesson final points are seen convenient to study in two dimensions. Contribution rates by dimensions to explanation of total inertia is 0.841. As for contribution of third dimension to be done to this rate is (0.134) lower then determined limit (for 6 individual category is 0,167) a third dimension is not added. When the situation is taken up from the point of view of individual points taking place in lines, while Economics, Public Finance and Business Adm. Departments are taking place in first dimension; International and Labor Departments in second dimension; in spite of Econometrics is taking place in first dimension, it also possesses some importance partly for second dimension. According to line and column coordinates it is understood that International Department is pertaining to good and very good point groups; Labor Economy Department to fair and good point groups; Econometrics Department has a low profile in both dimensions, is taking place in negative region and pertaining to fair point group. Economics Department to very poor, poor and indirectly fair point groups; Business Adm. and Public Finance Departments to fair and poor point groups. No discrimination of numeric and literary contents section is done in final points of Business Adm. lesson. International and Labor Departments are successful.

Business Administration lesson make-up points are studied in two dimensions. Contribution rates by dimensions to explanation of total inertia is 0.852. The similar of discrimination in final points are appeared also here. Econometrics,

Labor and International Departments have taken place in first dimension; Economics, Public Finance and Business Adm. Departments in second dimension. Econometrics Department are seen pertaining to very poor point group; Labor and International Departments to null; Finance to fair and poor; Economics and Business Adm. Departments good and fair point groups. Also no discrimination of numeric and literary contents section is not seen but it is observed that there is a change in successful departments in final and make-up examinations.

Second classes:

Statistics final examination points are tried to be explained with two dimensions but, in spite of having low contribution, from the point of view to be able to give department differentiation better, it is understood that third dimension also should take place. Contribution rate of three dimensions to explanation of total inertia is 0.989. Economics, Public Finance and International Departments are taking place in first dimension; Econometrics Department in the second; Business Adm. Department in third dimension. Economics Department is seen pertaining to very good point together with same point groups; Econometrics Department with good, fair and poor points; Business Adm. Department very poor, null and poor point groups. Shortly we can say Econometrics and Economics Departments are successful in final of Statistics.

Analysis in Statistics make-up examinations is realized with two dimensions. Contribution rate of dimensions to explicability of total inertia is 0.867. Public Finance, Econometrics and Labor Departments are taking place in first dimension; Economics, Business Adm. and International Departments in second dimension. Public Finance and Labor Departments are taking place in positive region with their profiles over average frequencies and seen pertaining to null point group. Econometrics Department is seen pertaining to good (5), poor (3) and null (1); International Department to fair (4), good (5) and null (1) point groups; Business and Economics Departments to very poor (2), null (1), fair (4) and good point groups. The success of Econometrics Department is partly declined, but it can be said that a development in the success of Economics and International Departments. *Also no discrimination of numeric and literary contents section is not conspicuous.*

Another interesting finding also is that successful departments in final and make-up examinations are showing difference in various analyses.

⁽¹⁾Teknolojinin modele dahil edilmesi gereği çok sayıda çalışmada dile getirilmiştir. Bu çalışmaların arasından, örneğin, Valdés (1999), Chapter 6'ya bakılabilir.

Final examination points of quantitative Economics are studied three-dimensionally. Contribution rate of dimensions to explanation of total inertia is determined as 0.99. International and Business Administration Departments are taking place in first dimension; Economics, Public Finance and Econometrics Departments in second dimension; Labor Department in third dimension. International and Business Adm. Departments are seen pertaining to null and fair point group; Economics Department to good and very good besides null, very poor and poor point groups; other departments to null, very poor and poor (unsuccessful) point groups. No discrimination of numeric and literary section. Economics department may be considered successful; this department is followed by International.

Make-up examination points of quantitative Economics are studied three-dimensionally. Contribution rate of dimensions to explanation of total inertia is calculated as 0.943. Economics and Econometrics Departments are taking place in first dimension; Public Finance and Labor Departments in second dimension; International and Business Adm. in third dimension. Business is found pertaining to good (5), fair (4), null (1) point groups; International fair (4) and null (1); Public Finance and Labor Departments null (1) and very poor (2); Economics Department good(5) and very good (6) besides null (1), very poor (2) point groups; Econometrics Department fair (4), good(5) and very good (6) besides null (1), very poor (2) point groups. Economics, International and Econometrics Departments are forming more successful departments partly. *While departments that are successful in final examinations continuing that success Business Administration and Econometrics Departments raised their success level. This finding has a nature to support preceding determinations.* It means, *no discrimination of numeric and literary sections is existing*, but departments that are unsuccessful in finals may have a higher level of success in make-up examinations separately some departments may not repeat their success in finals during make-up examinations.

Final examination notes of Macro Economics are analyzed in two dimensions. Contribution rate of dimensions to explanation of total inertia is calculated as 0.92. Public Finance, International, Econometrics and Business Adm. Departments are taking place from the point of view of their contribution to insertion of dimensions on line points in first dimension; Economics and Labor Departments in second dimension. Labor Department is seen pertaining to very good, good and partly null point groups; Economics Department to very good, good, very poor, fair and null point groups; International, Econometrics and Public Finance Departments to null and very poor point groups; as for Business Adm. Department to poor, good and partly poor point groups. Shortly we can say that Business Adm., Economics and Labor Departments are more successful.

Make-up examinations of Macro Economics are analyzed three-dimensionally. Contribution rate of dimensions to explanation of total inertia is calculated as 0.954. Economics, Public Finance, Business Adm. and International departments are taking place in first dimension; Econometrics and Labor Departments in second dimension. Third dimension has partly a quality of auxiliary dimension for Economics and Labor Departments. Economics, International, and Labor Departments are in close relation with poor (3) and fair (4), these point groups are followed by good (5) and very good (6) point groups. Business Adm. and Labor Departments are pertaining to very good (6), good (5), fair (4) and null (1) point groups; Econometrics Department to very poor (2), poor (3) and fair (4) point groups. Shortly we cannot say that success situation is not much changed. *Business, Labor and Economics Departments are more successful in Macro Economics.* Economics and Business departments are seen more successful in economics of second class.

Monetary theory (3.rd class) final examinations are analyzed in two dimensions. Contribution of dimensions is complete. Public Finance and Econometrics Departments are taking place in first dimension, Economics in second dimension. Public Finance Department is pertaining to null, very poor point groups; Econometrics Department to poor, fair; Economics Department good, very good and fair point groups.

As if make-up points of Monetary theory are seen explained completely in two dimensions, contribution of second dimension (0.273) is partial. Economics and Econometrics Departments are taking place in first dimension; Public Finance Department in second dimension. Public Finance Department is found pertaining to null and partly very poor point group; Econometrics Department to very poor, poor point groups; Economics Department to fair, good, very good point groups. It means success of Econometrics department is decreasing, that of Economics department is continuing.

Final examination points in Applied Statistics (3.rd class) are taken up with two dimensions. Contribution of two dimensions to explanation of total inertia is complete. This lesson shows some difference in Business Adm. Department. In the same way Business Administration Department has come out in second dimension alone. Economics Department is pertaining to null, poor and partly fair point groups; Econometrics to fair, good, very good point groups; Business Adm. Department to null and very poor point groups.

Make-up notes of applied statistics are taken up in two dimensions. Contribution of two dimensions is complete but contribution of second dimension is low. Economics and Business Adm. Departments are taking place in first dimension;

Econometrics in second dimension. But contribution of first dimension to inertia of econometrics profile is also high (0.302). Business Adm. Department is understood to be pertaining to fair, good and very good point categories. It means success of this department is increased in make-up examinations. In contrast to this a relation to null and fair point groups in Econometrics and Economics Departments. Consequently *while Business Administration Department was increasing success level other departments were not able to maintain their success.*

When lessons in third class are considered Labor and International relations departments have oriented to their special fields so it is seen that no lesson is found to compare. For this reason basic lessons considered are lessons with numeracy and literary contents in first and second classes. But, *not for all departments but to give an idea some lessons with common contents studied in some departments in third classes are included in analysis.*

Results of multivariate correspondence analysis:

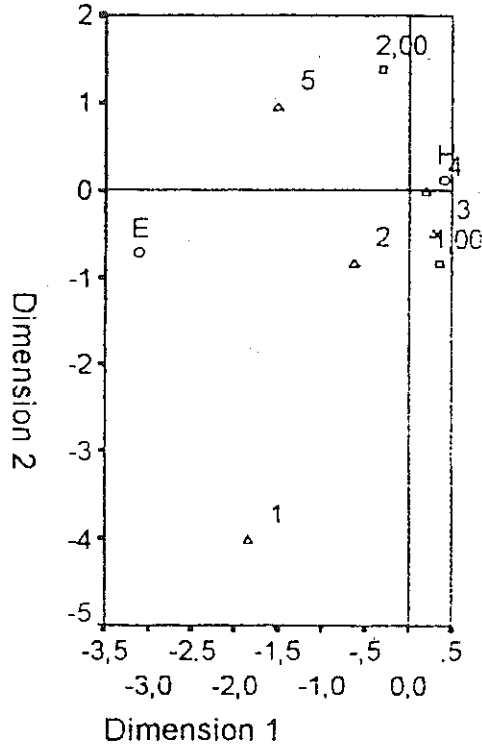
HOMOGENETY MODULE of SPSS 7.5 program is used in application of multivariate analysis. To make diagrams more comprehensible and from point of view of evaluation of Chi-square analyses points are taken up as FAILED 1 and PASSED 2. Analyses do not include all lessons but the ones found important and structural differences were appeared in former analyses too. Besides, findings are given in summary, homogenization results were given that is more comprehensible and convenient to the aim, instead of individual coordinates and diagrams related to them. As a matter of fact in the essence of analysis it lies understanding of how a convenience show categories related to normalize data transformed to squared form.

When final points of Economics, classified and standardized form of TS point in SST and variables that shows staying in dormitory are taken up together with Correspondence Analysis Method:

It is seen that students having 2 standard variation points higher than TS point are successful; shortly while the ones having higher points than average, as points are lower they are closing to be unsuccessful. This finding may be considered as an indication that success in Economics is dependent upon literary capabilities and susceptibility to the subjects with social content. If students coming from small cities of Anatolia, having one or two standard points lower than average TS (school average), partly with poor monetary situation and with poor social environment, are possessing responsibility, they feel themselves obliged to be successful; University is the only element to change their life. Naturally success of these students some more barren in comparison with students not staying in dormitory, having higher points.

Graph 1

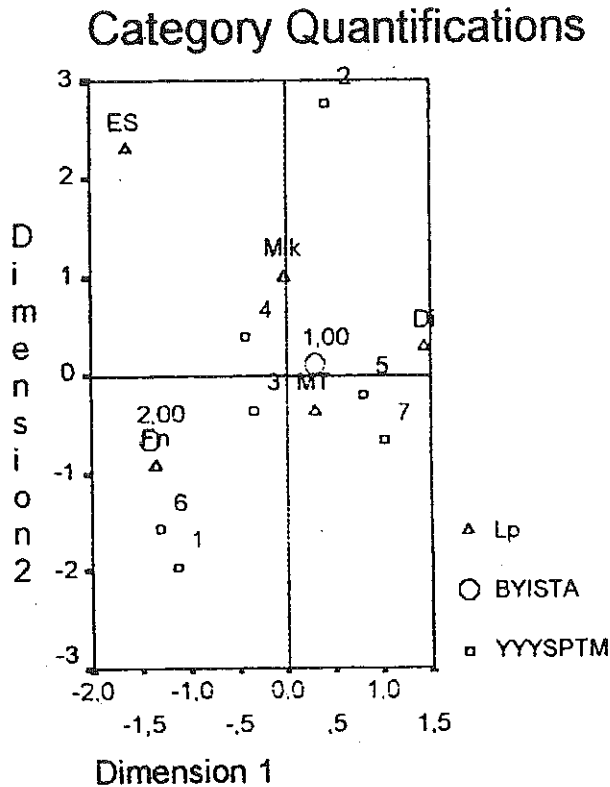
Economics Final Examination



Results of make-up examinations in Statistics, are taken up together with standardized – classified TM points and program type of high school graduated in two dimensions. Students graduated from Science, Mathematics – Turkish programs of high school, having high TM points are understood to be successful. Shortly successful and unsuccessful is discriminated and a dual structure is appeared.

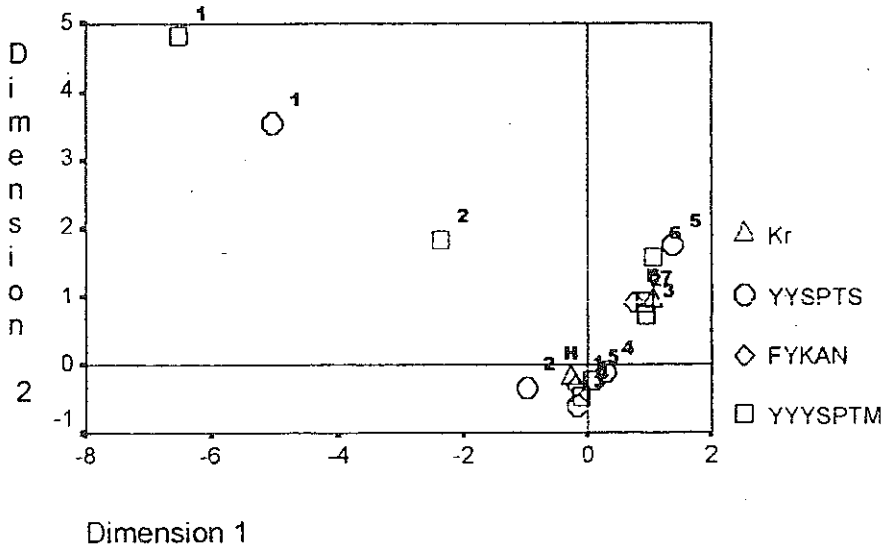
Graph 2

Statistics Make-up Examination



Quantitative Economics make-up points, TS, TM points in SST (standardized and classified) and situation of having student loan are considered together. Being successful is taking place in positive coordinates in first and second dimensions. Situation of having student loan is appeared in group being successful. Higher TM and TS points (over average) are seen related with being successful. As for lesson's being necessitating both numeric and literary capability, the result found is as it is expected. The success of students having student loan is evaluated as an indication of their firm intention to be successful. When graph is examined a dual and scattered structure appears, homogeneity is not obtained completely.

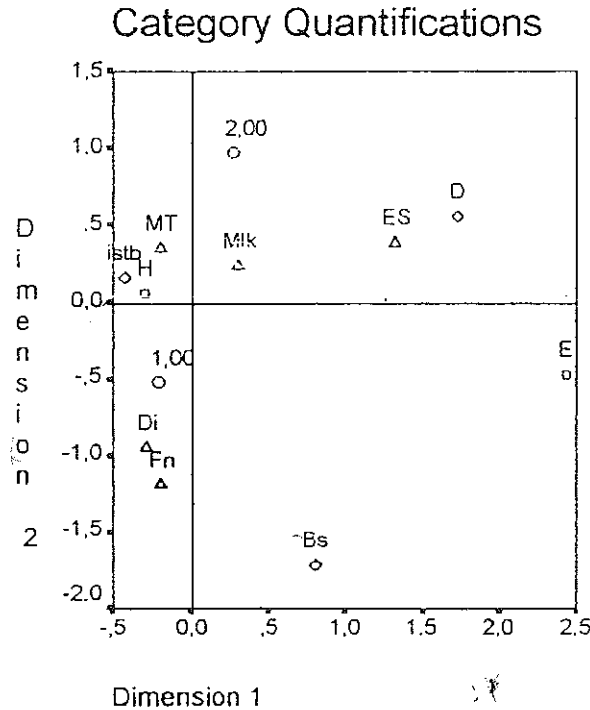
Graph 3
Quantitative Economics Make-up Examination



Final point of Macro Economics, when staying in dormitory, program graduated in high school, and location of high school graduated are studied together: Location of high school graduated is an indication of environmental conditions from where student have come; besides staying in dormitory can be considered as an indicator of monetary conditions, and moral conditions where student is. When graph and outputs are examined; it is understood that students graduated from Literature, Mathematics – Turkish, and trade programs are successful. Students coming from small cities in Anatolia and graduated from high school in Istanbul are more susceptible to success. Staying in dormitory is not seen as a factor much affecting success. The reason for this is unsuccessful students coming from big cities in Anatolia and not having sufficient motivation. Shortly success situation forms a much scattered structure.

Graph 4

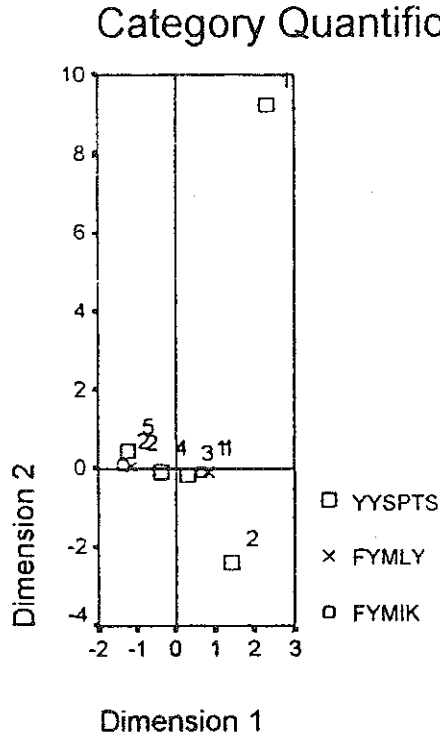
Macro Economics Final Examination



In the situation where Public Finance and Macro economics final notes considered together: It is understood that students having TS points on and over school average are successful in both lessons. It means lessons taken up are pertaining to literary capability. Even if these results found are not completely homogenous, relation between success situations in lessons and TS points are similar (Graph 5).

In addition if we come to finals of finance and TM points, students having TM points over average have fair, good and very good. As if a veritable fact there exists a one to one linear relation between standardized faculty TM points and finance final points. Categories of two variables have occurred much similar according to us.

Graph 5
Public Finance and Micro Economics Final Examination



4. Result- Evaluation

Success in Business Administration, International Relations and Economics Departments are determined to show similarities. Especially Business Adm. and Economics departments seem to have similar success profiles. Econometrics, Public Finance and Labor Economy Departments are forming second group, but success profiles of these three departments are being convenient to some more different structure.

No discrimination of numeric and literary has come out between lessons and departments. But the reason of not coming out of such a situation may be that instructors are treating different while evaluating departments and arranging hardness of lessons. It means this encountered situation is a success and proficiency of instructors but not students. We do not have sufficient data on this subject and

also we did not have any aim such as grading departments and lessons.

I came out that success profiles of final and make-up examinations are different to some extent. While one or a few of departments listed in first group are being successful in finals; in make-ups together with these departments success of members of second group departments, even sometimes more than former ones, are encountered. Another finding of us also is that successful departments and their success level show difference in finals and make-ups.

Under the light of these informations to follow common lessons in first and second class of Faculty of Economics will be useful. This will help also to solve space problem. But performing make-up examinations a long time after final examinations is an important peculiarity increasing success diagram. If the interval between examinations is being shorter general success diagram also possibly will be changed. When the tendency of students to differentiate lessons as lessons to be passed in finals and that of in make-ups created by number of lessons being much, meets the accumulating anxiety of instructors differences in finals are created. Make-up examinations are being an occasion caught that is evaluated well for students side. Students coming from Anatolia and accepting faculty that is gained to attend as an only chance are seen to be successful even with small supports (student loan, fee loan), and being able to stay in the dormitory solves many important problems.

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