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A comparative analysis of the first cycle degree programmes in business in Turkey in terms of the number of course units and the student workloads

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Abstract: This comparative study aims to determine the differences between the curricula of the first cycle degree programmes in business in Turkey in terms of the number of course units and the student workloads. In this context, (1) the courses included in the Bologna course information packages of business schools on their web sites have been examined; (2) course units have been gathered together in content-related groups, (3) the numbers of course units in each content-related group have been determined, (4) total student workload of each content-

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Authors' contributions: Sarıgül prepared the database; selected and defined variables used in the empirical investigation, presented the literature review. Şengelen performed the computations. All authors read and approved the final manuscript. The authors are responsible for any errors or omissions.

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Availability of data and material: Primary datasets used in this study are openly available in Higher Education Program Atlas which is one of the WEB sites of the Council of Higher Education in Turkey (<https://yokatlas.yok.gov.tr/> YÖK), and WEB sites of the first cycle degree programmes in business in Turkey. Derived data are available from the corresponding author upon request.

related group has been determined by means of the institutionally allocated ECTS credits, (5) the differences between public and foundation business schools have been tested for each content-related group in terms of total number of course units and total student workload, and (6) the differences between the business schools using Turkish and those using a foreign language as the medium of instruction have been tested for each content-related group in terms of total number of courses and total student workload. The methods used in the research are document review and multivariate analysis. The data of 147 business schools has been used in the study and the outputs of the research reveal that there are significant differences in most of the content-related groups between both the business school groupings described above at points (5) and (6) in terms of the number of course units and student workload.

Keywords: Higher education; business schools; curriculum; degree programme profile; MANOVA.

I. Introduction

The economic environment in the twenty-first century, combined with the dizzying rate of change, puts additional pressure on business education with its diverse stakeholders. The demands are more different than ever, changing constantly, and more complex. Due to the core transformations in the business environment, such as globalisation, new forms of organisations, spread of computerization to almost every field and artificial intelligence applications, the businesses need a workforce which is working at a higher level and has a variety of complex skills and competencies.^{1,2,3,4,5} The

¹ Saad Zighan, and Ahmed El-Qasem, “Lean Thinking and Higher Education Management: Revaluing the Business School Programme Management,” *International Journal of Productivity and Performance Management* 70, no. 1 (2021): 675–703, <https://doi.org/10.1108/IJPPM-05-2019-0215>.

² Sherif Kamel, “The Impact of Business Schools in Transforming the Society Case: AUC School of Business,” *Journal of Economic and Administrative Sciences* 36, no. 1 (2020): 38–63, <https://doi.org/10.1108/JEAS-10-2018-0110>.

³ Donald A. Carpenter, and Vijay K. Agrawal, “Infusing Information Technology into The Core Business Curriculum: A Change Management Project,” *The Journal of Business Inquiry* 7, no. 1 (2018): 3–20, <https://journals.uvu.edu/index.php/jbi/article/view/161>.

⁴ Simon O’Leary, “Graduates’ Experiences of, and Attitudes Towards, The Inclusion of Employability-Related Support in Undergraduate Degree Programmes; Trends and Variations by Subject Discipline and Gender,” *Journal of Education and Work* 30, no. 1 (2017): 84–105, <https://doi.org/10.1080/13639080.2015.1122181>.

⁵ Jiju Antony, “Readiness Factors for The Lean Six Sigma Journey in The Higher Education Sector,” *International Journal of Productivity and Performance Management* 63, no. 2 (2014): 257–264, <https://doi.org/10.1108/IJPPM-04-2013-0077>.

developments occurring in the business environment force business schools to keep up with the changes. In other words, business schools are exposed to important and inevitable changes due to environmental factors that impact their way of administration, integration into technology, pedagogical approaches including experiential learning, collaborative and open learning spaces, ethical practices, and social responsibility. Business education has two major functions: to produce information and to contribute to the development of society while providing a qualified, competent, and skilled workforce for the business world.^{6,7,8} Business education should provide theoretical and practical knowledge and skills that lead to better planning, organization, implementation, and control of economic activities not only for the private sector but also for the public and not-for-profit organizations.⁹

For several decades, many business scholars have been particularly critical of the state of business education. However, these criticisms, albeit plentiful, did not reveal an important and sustainable change effect on business education. It is argued that the lack of change depends in part on institutional practices and the absence of a unified framework on how to conduct higher education in the business world.¹⁰ There are also developments in parallel with the decline in the dominance of US business schools. Different regions and countries have started to develop or reaffirm their own business school models.¹¹ Business schools differ in many aspects such as: private – public, self-standing – embedded in larger universities, theoretically oriented – managerially oriented, religious – secular, small – large, degree awarding – non-degree awarding, with executive education – without executive education, using local language as a medium of instruction – using

⁶ Howard Bowen, *Investment in Learning: The Individual and Social Value of American Higher Education* (New York: Routledge, 1996).

⁷ Jing Lu, Chad Laux, and Jiju Antony, “Lean Six Sigma Leadership in Higher Education Institutions,” *International Journal of Productivity and Performance Management* 66, no. 5 (2017): 638–650, <https://doi.org/10.1108/IJPPM-09-2016-0195>.

⁸ Joe L. Kincheloe, (2004) “The Knowledges of Teacher Education: Developing A Critical Complex Epistemology,” *Teacher Education Quarterly* 31, no. 1 (Winter 2004): 49–66, <https://files.eric.ed.gov/fulltext/EJ795234.pdf>.

⁹ Tuning EU, *Tuning Educational Structures in Europe – Reference Points for the Design and Delivery of Degree Programmes in Business*. Publicaciones de la Universidad de Deusto (2009), 21, http://tuningacademy.org/wp-content/uploads/2014/02/RefBusiness_EU_EN.pdf.

¹⁰ K. Doreen MacAulay, Mark J. Mellon, and Walter R. Nord, “Reorienting Business Education Through the Lens of Ernest Boyer,” *American Journal of Business* 35, no. 1 (2020): 45–59, <https://doi.org/10.1108/AJB-05-2019-0027>.

¹¹ Howard Thomas, Peter Lorange, and Jaddish Sheth, *The Business School in The Twenty-First Century: Emergent Challenges and New Business Models* (Cambridge: Cambridge University Press, 2013).

a foreign language as a medium of instruction.¹² Moreover, along a continuum, Tuning EU states that business degrees may be classified as environment, enterprise and function-specific oriented business schools.

In this study, aspects of public (PUPBS) and foundation (FOUBS) first cycle degree programmes in business, the first cycle degree programmes in business using Turkish (TRIBS), and those using a foreign language (FLIBS) as the medium of instruction are considered as pairwise independent variables. Foundation universities have been offering educational services and carrying out research activities in many countries for a long time. However, Turkey's first foundation university wasn't founded until 1984. While public universities in Turkey are only autonomous in terms of scientific and educational activities, foundation universities also have financial and administrative autonomy. Another divergence between higher education programmes in Turkey is between programmes using Turkish as the medium of instruction and those using a foreign language as the medium of instruction. With increasing globalization, business education is expected to educate a workforce for a more fiercely competitive international environment.¹³

The business schools, PUPBS or FOUBS and TRIBS or FLIBS may differ in terms of curricula. The quality of the knowledge and skills that students will acquire depends on the course content and curriculum pedagogy. In higher education, the curriculum is considered as the most important component in terms of providing quality and relevant education programmes and services to current and potential students. Regardless of its size, type or origin, the curriculum is considered as the heart and soul of all educational programmes. The curriculum is also very important for effective and efficient higher education.^{14,15} In this context, business schools should develop curricula that will equip students with the knowledge, skills, techniques, attitudes and competencies required by the labour market.¹⁶ To ensure that

¹² Bodo B. Schlegelmilch, "Why Business Schools Need Radical Innovations: Drivers and Development Trajectories," *Journal of Marketing Education* 42, no. 2 (2020): 93–107, <https://doi.org/10.1177/0273475320922285>.

¹³ Myriam Met, "Making Connections" in *Foreign Language Standards: Linking Research, Theories and Practices*, ed. June K. Phillips, and Robert M. Terry (Lincolnwood: National Textbook Co, 1999), 137–164.

¹⁴ Lakshmi Tatikonda, "Applying Lean Principles to Design, Teach, and Assess Courses," *Management Accounting Quarterly* 8, no. 3 (Spring 2007): 27–38, <https://www.proquest.com/scholarly-journals/applying-lean-principles-design-teach-assess/docview/222859350/se-2>.

¹⁵ Ronald Barnett, and Kelly Coate, *Engaging the Curriculum in Higher Education* (Buckingham: SRHE & Open University Press, 2005).

¹⁶ Gay Crebert, Merrelyn Bates, Barry Bell, Carol-Joy Patrick, and Vanda Cragolini, "Developing Generic Skills at University, During Work Placement and in Employment:

students are able to practice to experience their skills from an integrated perspective at various stages throughout their academic programme, creating multi-disciplinary case studies and enterprises to be incorporated across modules at key points of the curriculum are recommended by both researchers and practitioners. A programme that uses an integrative curriculum can provide students with an opportunity to develop interpersonal, communication and leadership skills.¹⁷

The expectations for knowledge, understanding and application of subject-specific material in the classification developed by the Tuning Subject Area Groups for business and management education for structuring course programmes according to learning outcomes are that learners acquire subject-related core knowledge, understand and be able to broaden and deepen this knowledge with possible vertical, horizontal and diverse orientations according to the needs of the labour market.¹⁸ The academic competencies of the Council of Higher Education (CoHE) in Turkey towards the first cycle degree business and management education knowledge and skills contain similar learning outcomes with the Tuning Business Group. According to CoHE the graduates of the first cycle degree programmes in business and management (1) acquire advanced level knowledge within the field, (2) gain skills to transfer knowledge related to the field to professionals and team members, (3) develop skills to gather, evaluate, interpret, and analyse data, and (4) define problems and offer solutions by using the knowledge and manner obtained within the subject area.

Student workload, which is one of the components of curriculum, has commonly been recognised as a major factor in the teaching and learning environment. The tendency in the literature is distinguishing the student workload as objective, subjective as well as the perceived workload. The objective workload, which will be used as a dependent variable in our study to compare the business schools, is commonly measured as the number of hours that a student objectively spends on the activities for a course. The Bologna Process developed the European Credit Transfer and Accumulation System (ECTS) in order to determine the objective student workload in the European Higher Education Area.

The credit system used in the Turkish higher education system was based on theoretical or practical class hours per week in which one credit stood for

Graduates Perceptions,” *Higher Education Research and Development* 23, no. 2 (2007): 147–165, <https://doi.org/10.1080/0729436042000206636>.

¹⁷ Michael Tomlinson, “Graduate Employability: A Review of Conceptual and Empirical Themes,” *Higher Education Policy* 25, (2012): 407–431, <https://doi.org/10.1057/hep.2011.26>.

¹⁸ Tuning EU, *Tuning Educational*, 12, 35.

one lecture hour a week. According to the Bologna Process Turkish universities have converted their credit systems to ECTS measure which refers to the number of working hours including lectures attended, seminars or tutorials, plus independent and private study, preparation of projects, examinations, etc. to complete all learning activities associated with either a course unit or a complete educational programme.^{19,20,21,22} While the exact number of hours differs among higher education institutions in Turkey, one ECTS credit can be equal from 25 to 30 working hours as an average, which means between 1,500 and 1,800 working hours in total per academic year depending on the course components. According to Tuning “ECTS is not only a system for facilitating the mobility of students across Europe through credit accumulation and transfer; ECTS can also facilitate programme design and development, particularly with respect to coordinating and rationalising the demands made on students by concurrent course units”. In other words, ECTS permits us to plan how best to use students’ time to achieve the aims of the educational process, rather than considering teachers’ time as a constraint and students’ time as basically limitless. The Tuning approach specifies that credits can only be awarded to the student when the learning outcomes have been met. In the Tuning project, the knowledge expected to be gained by a graduate, what s/he should understand, and that they can give practical exhibition, and explanation are expressed as the learning outcomes. Competences, in which learning outcomes are subsumed, are developed in each course unit in a programme, and represent a combination of attributes including cognitive and meta-cognitive skills, knowledge and understanding, interpersonal, intellectual, and practical skills, and ethical values.²³

In terms of the terminology of the Bologna Process, Turkish higher education encompasses all post-secondary higher education programmes consisting of short, first, second, and third cycle degrees. The structure of Turkish higher education is based on one-tier and two-tier systems. The

¹⁹ Eva Kyndt, Inneke Berghmans, Filip Dochy, and Lydwin Bulckens, “Time Is Not Enough. Workload in Higher Education: A Student Perspective,” *Higher Education Research and Development* 33, no.4 (2014): 684–698, <https://doi.org/10.1080/07294360.2013.863839>.

²⁰ David Kember, “Interpreting Student Workload and The Factors Which Shape Students’ Perceptions of Their Workload,” *Studies in Higher Education* 29, no. 2 (2004): 165–184, <https://doi.org/10.1080/0307507042000190778>.

²¹ Asko Karjalainen, Katariina Alha, and Suvi Jutila, *Give Me Time to Think. Determining Student Workload in Higher Education* (Oulu: Oulu University Press, 2006).

²² European Commission Bologna Working Group, *A Framework for Qualifications of the European Higher Education Area*. Bologna Working Group Report on Qualifications Frameworks (2005).

²³ Tuning EU, *Tuning Educational*, 35.

duration of the one-tier system which includes dentistry, pharmacy and veterinary programmes is five years and 300 ECTS except for medicine which lasts six years and is 360 ECTS. The qualifications of one-tier programmes are accepted as equivalent to the sum of first cycle and second cycle degrees. Short cycle and four-year first cycle degree programmes consist of 120 ECTS and 240 ECTS respectively. The second cycle programmes ending with a thesis have a minimum of seven courses, and non-thesis programmes with a minimum of 10 courses require 120 ECTS.

According to a report by Tuning EU, “while a number of similarities exist in European institutions regarding first cycle programmes, it is also true within individual countries, and it is not uncommon to find that several variants of the same degree are offered by the same institution”.²⁴ In this context, this study investigates the curricula of degree business schools in Turkey which are all first cycle higher education programmes based on the one-tier system with 240 ECTS, focusing on the content-related course groups and student workload components in comparison of PUPBS – FOUBS, and TRIBS – FLIBS.

II. Sample and methodology

Business schools were initially identified from the first and second cycle degree programmes module of Higher Education Program Atlas, which is one of the websites of the CoHE by using the keyword “business”, and it was determined that there were 325 business schools in Turkey as of March 3, 2020. Out of these, the short cycle programmes ($n = 142$) were excluded from the research. Subsequently, the curriculum and course content in the WEB sites of the first cycle degree programmes in business ($n = 183$) were examined, and it was seen that the data to be used in the study were available for 147 of the 183 of the first cycle degree programmes in business. Out of these $n = 104$ were public universities and $n = 43$ were not-for-profit foundation universities. Private for-profit universities do not exist in Turkey as they are not permitted by a higher education law. In addition, $n = 106$ use Turkish as the medium of instruction, and $n = 41$ use a foreign language as the medium of instruction. It was assumed that the information on the WEB sites of the universities were up-to-date, and that the courses were instructed in accordance with the curricula. Turkish Language, and Atatürk’s Principles and Turkish Revolution History courses, which CoHE requests to be offered in all higher education programmes in Turkey, were not included in the

²⁴ Tuning EU: *Tuning Educational*, 23.

research. The content-related groups (CRGs) and the names of the course units, as determined on the examination of business schools' WEB sites are presented in Table 1 excluding electives since they are too numerous.

Table 1
Content-related groups and names of course units

CRGs	Names of course units
Accounting	Accounting, Principals of Accounting, Financial Accounting, General Accounting, Intermediate Accounting, Corporate Accounting, Managerial Accounting, Cost and Managerial Accounting, Year-End Accounting Procedures, Financial Reporting, Auditing
Behavioural Sciences	Principles of Behavioural Sciences, Introduction to Sociology, Introduction to Psychology, Social Psychology, Organizational Behaviour, Introduction to Behavioural Sciences, Psychology, Sociology
Economics	Introduction to Economics, Microeconomics, Macroeconomics, Principles of Macroeconomics, Microeconomic Theory, Principles of International Economics, Structure of Turkish Economy
Finance	Principles of Finance, Business Finance, Financial Management, Managerial Finance, Corporate Finance, International Financial Management, Financial Analysis, Financial Statement Analysis, Investment Projects Analysis, Financial System and Environment, Capital Markets, Financial Markets and Organizations, Financial Institutions, Money and Banking
Management Information Systems	Introduction to Information Technologies and Applications, Fundamental of Information Technologies, Introduction to Computers and Information Systems, Introduction to Computing for Economics and Management, Art of Computing, Computer Programming for Business Applications, Business Communications, Management Information Systems, Computer Laboratory, Computer Literacy, Business Data Processing and Programming, Computer Applications in Business
Law	Basic Principles of Law, Introduction to Law, Fundamentals of Law, Fundamental Concepts of Law, Business Law, Law for Business and Economics, Law for Managers, Law of Obligations, Obligatory Law, Basic Principles of Commercial Law, Constitutional Law, Labour and Social Security Law, Labour Law

CRGs	Names of course units
Management and Organization	Management and Organization, Management Science, Production and Operations Management, Introduction to Business Administration, Principles of Business Administration, Exploring Business Administration, Business Management, Management of Organizations, Organizational Theory and Design, Organizational Design, Organization Theory, Management Science, Operations Management, Supply Chain Management, Business Model Planning, Strategic Management, Business Ethics and Corporate Social Responsibility, International Management, Quality Management Systems and Standards, Leadership, Leadership and Change Management, Human Resources Management, Social Responsibility and Professional Ethics, Business Policies, Business Policy and Strategic Management, Production Management, Products and Services Management, Contemporary Approaches in Management, Managing Individuals at Work, Labour Relations, Innovation Management, Strategy and Policy
Marketing	Principles of Marketing, Marketing Management, Strategic Marketing Management, International Marketing, Global Marketing, Marketing Strategies, Marketing Applications, Sales Management, Consumer Behaviour
Quantitative Methods	Business Mathematics, Business Statistics, Business Research Methods, Calculus, Calculus for Business, Statistics, Econometrics, Statistics for Business, Statistical Analysis, Financial Mathematics, Mathematics for Business, Introduction to Linear Algebra, Quantitative Methods in Business, Managerial Statistics, Statistics for Social Sciences, Applied Statistics, Introduction to Probability and Statistics, Quantitative Analysis, Quantitative Applications in Business, Quantitative Business Analysis, Research Methods for Business and Economics, Scientific Research and Report Writing, Differential
Foreign Language	English, Business English, Academic English, English for Academic Purposes, Academic Reading and Writing, English for Administrative Purposes, English for Occupational Purposes, Critical Reading and Writing in English, Translation, Advanced English, Academic French, Integrated Language Skills, English and Composition, Professional English
Project–Seminar–Internship	Bachelor of Arts Degree Project, Graduation Project of Business, Capstone Project, Summer Internship, Summer Practice, Independent Study, Business Practice Workshop

CRGs	Names of course units
Others related to the field	Introduction to Business, Fundamentals of Business, Professional Orientation and Introduction to Business Administration, Contemporary Topics in Business, Globalization and International Business, Global Business, Entrepreneurship and New Venture Development, Entrepreneurship, Innovation and Entrepreneurship, E-Commerce and E-Business, Taxation in Business, Introduction to Sustainability, Understanding Politics and Economy, Business Environment in Turkey
Other Course Units	Orientation, Academic and Social Orientation, Introduction to Social Sciences, Humanities / Social Sciences, Academic Presentation Skills, Social Responsibility Project, Business Communication and Negotiation Techniques, History of Civilization, Formation of the Modern World, Making of The Modern World, Modernity and The Consumer Society, Globalization, Turkish Taxation System, World History, History and Philosophy of Social Sciences, History of Science and Technology, History of Civilization and Science, Introduction to Political Science, Introduction to University Life, Critical Reading and Writing in Turkish, Art and Culture, Human Rights and Public Freedoms, Gender Equality, Cultures Civilizations and Ideas, Introduction to Philosophy, Academic Success and Social Life Skills, Career and Life Planning, Exploring Istanbul, Understanding Society and Culture, World Civilizations and Global Encounters, City and Culture Istanbul

Turkey's core, supporting and complementary CRGs offered in the first cycle degree programmes in business align with those offered in the European Higher Education Area. The European Higher Education Area has a wide variety of first cycle business degree programs with specializations in one or other business-specific areas. The core knowledge topics include operations management, logistics, sales, and marketing. Organization, human resource management, finance and accounting, and general management course groups are the supporting modules. Courses on economics and law are widely offered as complementary subjects. Instrumental skills courses are gaining significant importance, and within this framework, information technology and quantitative methods courses are becoming widespread. Apart from these, the courses aiming at improving personal organization and communication skills are included in many of the programmes.²⁵

²⁵ Tuning EU: *Tuning Educational*, 24.

In the next stage of the study, the data of the course groups were gathered together. To create comparable data, the number of course units and a student's workload for each CRG was selected as dependent variables. The number of credits of the course units allocated according to the European Credit Transfer System (ECTS) was taken into account as the individual student's workload. In most European countries ECTS has been applied to the curricula of universities as both a credit accumulation and transfer system, with learning outcomes and student workload increasingly used as the basis for credit allocation.²⁶

Our analysis aims to respond to the following questions: How are the two dependent variables in each CRG affected by either of the two independent pairwise variables? Moreover, if we use statistical software to do this, can we trust the differences in mean values, as yielded by the analysis? In order to answer these questions, we rely on the statistical software "IBM Statistical Package for the Social Sciences" (Version 22) and — more in particular — we use MANOVA—Multivariate Analysis of Variance, the correct statistical tool in our case, since we want to assess the effects of each independent group variable (i.e., PUPBS – FOUBS or TRIBS – FLIBS) on the two measurable dependent variables (i.e., number of course units and ECTS credits in all CRGs).

III. Results

III.1. Exploratory data analysis

The descriptive statistics of the CRGs in terms of the number of course units are given in Table 2. When elective courses are excluded, it is seen that the maximum number of course units (5.56) and student workload (27.47) are in the management and organization CRG as an average. At least one management and organization, accounting and quantitative methods course unit is included in Turkey's first cycle business programmes. These CRGs are among the core and supporting knowledge topics specified by Tuning EU. In a calculation using the table values, it can be observed that the ratio of the mean student workload of the CRGs to the mean number of courses of the business schools in Turkey is 4.73. In other words, all business schools in the study allocate about 5 ECTS as an average to each course unit.

²⁶ European Commission/EACEA/Eurydice, *The European Higher Education Area in 2018: Bologna Process Implementation Report* (Luxembourg: Publications Office of the European Union, 2018).

Table 2
Descriptive statistics

	<i>n</i>	x_{min}	x_{max}	\bar{x}	<i>s</i>		<i>n</i>	x_{min}	x_{max}	\bar{x}	<i>s</i>
ACC	147	1	9	4.46	1.9	ACW	147	4	50	22.76	9.7
BSC	147	0	3	1.58	0.75	BSW	147	0	19	7.21	3.59
ECC	147	0	6	2.8	1.06	ECW	147	0	32	13.8	5.18
FNC	147	0	7	2.93	1.23	FNW	147	0	32	14.8	6.21
MIC	147	0	3	1.11	0.78	MIF	147	0	16	4.1	3.23
LWC	147	0	8	2.97	1.54	LWW	147	0	39	12.63	6.45
MOC	147	2	16	5.56	2.01	MOW	147	7	71.5	27.47	9.7
MRC	147	0	6	2.54	1.14	MRW	147	0	31	12.39	5.88
QMC	147	2	8	5.05	1.33	QMW	147	7	44	24.91	6.3
FLC	147	0	14	1.29	2.18	FLW	147	0	48	4.88	8.52
PIC	147	0	6	0.9	1.16	PIW	147	0	52	5.85	9.25
RFC	147	0	8	2.3	1.18	RFW	147	0	34	11.1	5.79
OTC	147	0	11	1.39	1.61	OTW	147	0	49	5.18	6.41
DEC	147	0	22	11.26	4.08	DEW	147	0	114	52.13	19.8
NEC	147	0	12	1.84	2.88	NEW	147	0	62	7.58	13.21

where; ACC: total number of accounting course units, ACW: a student's workload for total accounting course units, BSC: total number of behavioural science course units, BSW: a student's workload for total behavioural science course units, ECC: total number of economics course units, ECW: a student's workload for total economics course units, FNC: total number of finance course units, FNW: a student's workload for total finance course units, MIC: total number of management information systems course units, MIW: a student's workload for total management information systems course units, LWC: total number of law course units, LWW: a student's workload for total law course units, MOC: total number of management and organization course units, MOW: a student's workload for total management and organization course units, MRC: total number of marketing course units, MRW: a student's workload for total marketing course units, QME: total number of quantitative methods course units, QMW: a student's workload for total quantitative methods course units, FLC: total number of foreign language course units, FLW: a student's workload for total foreign language course units, PIC: project-seminar-internship total number, PIW: a student's workload for total projects-seminars-internship, RFC: total number of the other course units related to the field, RFW: a student's workload for the total other course units related to the field, OTC: total number of other course units, OTW: a student's workload for other course units, DEC: total number of departmental elective course units, DEW: a student's workload for total departmental elective course units, NEC: total number of non-departmental elective course units, NEW: a student's workload for non-departmental elective course units, *n* is total observations, x_{min} is minimum value, x_{max} is maximum value, \bar{x} is sample mean and *s* is sample standard deviation.

With reference to the statistics in Table 3 below, it is notable that the mean course unit numbers offered in POUBS are greater than the FOUBS in departmental electives, accounting, behavioural sciences, economics, finance, management information systems, law, management and organization, and quantitative methods knowledge topics. On the other hand, the mean number of course units offered in non-departmental electives, project-seminar-internship, others related to the field, other course units, and foreign language CRGs are higher at FOUBS. First cycle business programmes in public universities include 1.76 times more accounting and law course units on average than foundation business schools. At least one course unit specified as core, supporting and contemporary knowledge topics by Tuning EU is offered at all FOUBS. However, marketing, which is stated as a supporting knowledge module by Tuning EU, is not included among the CRGs in at least one first cycle business programme in public higher education institutions.

Table 3
Course unit number descriptive statistics of POUBS and FOUBS

POUBS					FOUBS					(:)
	X_{min}	X_{max}	\bar{x}	s		X_{min}	X_{max}	\bar{x}	s	
ACC	1	9	5.11	1.69	ACC	1	7	2.91	1.39	1.76
BSC	0	3	1.62	0.69	BSC	0	3	1.49	0.88	1.09
ECC	0	6	2.98	1.10	ECC	1	5	2.37	0.82	1.26
FNC	1	7	3.13	1.14	FNC	0	6	2.44	1.30	1.28
MIC	0	3	1.15	0.81	MIC	0	3	1,00	0.69	1.15
LWC	1	8	3.39	1.48	LWC	0	5	1.93	1.14	1.76
MOC	2	16	5.71	1.92	MOC	2	12	5.19	2.18	1.10
MRC	0	6	2.77	1.15	MRC	1	4	2,00	0.93	1.39
QMC	2	8	5.26	1.31	QMC	2	7	4.56	1.26	1.15
FLC	0	10	0.78	1.73	FLC	0	14	2.51	2.63	0.31
PIC	0	6	0.74	1.08	PIC	0	4	1.28	1.26	0.58
RFC	0	8	2.25	1.12	RFC	0	6	2.42	1.31	0.93
OTC	0	8	1.16	1.25	OTC	0	11	1.93	2.16	0.60
DEC	0	22	12.09	4.06	DEC	0	17	9.26	3.41	1.31
NEC	0	10	1.13	1.98	NEC	0	12	3.53	3.89	0.32

(:) is the ratio between means (PUPBS over FOUBS).

As shown in Table 4 below, the mean number of course units offered in law and accounting CRGs in TRIBS are 1.86 and 1.75 times more than FLIBS. Furthermore, on average, there is a greater number of course units in FLIBS in management and organization, foreign language, project–seminar–internship, other course units, and non–departmental topics while TRIBS offer more course units in the CRGs other than the ones mentioned above.

Table 4
Course unit number descriptive statistics of TRIBS and FLIBS

TRIBS					FLIBS					(:)
	x_{min}	x_{max}	\bar{x}	s		x_{min}	x_{max}	\bar{x}	s	
ACC	1	9	5.07	1.72	ACC	1	7	2.9	1.37	1.75
BSC	0	3	1.60	0.70	BSC	0	3	1.51	0.87	1.06
ECC	1	6	2.93	1.04	ECC	0	6	2.46	1.05	1.19
FNC	0	7	3.14	1.21	FNC	1	6	2.39	1.12	1.31
MIC	0	3	1.11	0.78	MIC	0	3	1.1	0.77	1.01
LWC	1	8	3.41	1.49	LWC	0	5	1.83	1.00	1.86
MOC	2	16	5.40	1.99	MOC	2	10	5.98	2.02	0.90
MRC	0	6	2.71	1.10	MRC	1	5	2.12	1.14	1.28
QMC	2	8	5.27	1.35	QMC	2	7	4.49	1.10	1.17
FLC	0	14	0.92	2.12	FLC	0	10	2.22	2.07	0.41
PIC	0	4	0.77	1.02	PIC	0	6	1.22	1.42	0.63
RFC	0	8	2.34	1.09	RFC	0	6	2.2	1.38	1.06
OTC	0	8	1.16	1.28	OTC	0	11	1.98	2.15	0.59
DEC	0	22	11.57	4.15	DEC	0	18	10.5	3.84	1.11
NEC	0	12	1.58	2.69	NEC	0	10	2.49	3.28	0.63

(:) is the ratio between means (TRIBS over FLIBS).

The statistics in Table 5 below show that the lowest mean student workloads are at the foreign language CRG (2.98) in PUPBS and management information systems CRG (4.47) in FOUBS. Not considering elective

courses (which alone cover about 25% of the credits total, see also below), the highest mean student workload is at the management and organization CRG in both PUPBS (11.56% of the total) and FOUBS (11.16%). As to the main differences, we can notice that the workloads of POPBS students at department electives and accounting subject groups as an average are 4.08 percent (9.78 ECTS) and 4.19 percent (10.06 ECTS) heavier than those attending FOUBS. On the other hand, the workload of FOUBS students at non-departmental electives course group are 4.86 percent (11.67 ECTS) heavier as an average than the POUBS students should cope with.

Table 5
Student Workload descriptive statistics of PUPBS and FOUBS

	PUPBS				FOUBS				Differences	
	x_{min}	x_{max}	\bar{x}	(%)	x_{min}	x_{max}	\bar{x}	(%)	$d_{\%}$	d ECTS
ACW	6.00	47.00	25.70	10.71	4.00	50.00	15.64	6.52	4.19	10.06
BSW	0.00	15.00	6.98	2.91	0.00	19.00	7.77	3.24	-0.33	-0.79
ECW	0.00	28.00	13.87	5.78	4.00	32.00	13.65	5.69	0.09	0.21
FNW	5.00	32.00	15.42	6.43	0.00	30.00	13.29	5.54	0.89	2.13
MIW	0.00	15.00	3.95	1.65	0.00	16.00	4.47	1.86	-0.21	-0.51
LWW	2.00	39.00	14.17	5.91	0.00	25.00	8.91	3.71	2.19	5.27
MOW	9.00	71.50	27.75	11.56	7.00	58.00	26.79	11.16	0.40	0.96
MRW	0.00	31.00	13.18	5.49	3.00	21.00	10.49	4.37	1.12	2.69
QMW	7.00	37.00	24.83	10.34	9.00	44.00	25.12	10.47	-0.12	-0.29
FLW	0.00	48.00	2.98	1.24	0.00	44.00	9.49	3.95	-2.71	-6.51
PIW	0.00	52.00	4.42	1.84	0.00	36.00	9.29	3.87	-2.03	-4.87
RFW	0.00	34.00	10.53	4.39	0.00	30.00	12.47	5.19	-0.81	-1.94
OTW	0.00	22.00	4.28	1.78	0.00	49.00	7.37	3.07	-1.29	-3.09
DEW	0.00	114.00	54.99	22.91	0.00	77.00	45.21	18.84	4.08	9.78
NEW	0.00	40.00	4.16	1.73	0.00	62.00	15.84	6.60	-4.86	-11.67

x_{min} and x_{max} represent minimum and maximum values respectively. \bar{x} is the sample mean. s stands for sample standard deviation. (%) represents the percentage of the CRGs' total workload over 240 ECTS. $d_{\%}$ is the difference between the percentages (each CRGs workload total over 240 ECTS) of PUPBS and FOUBS. d ECTS display the percentage difference translated into ECTS.

The similarities and differences are further illustrated by Figure 1 below. The most noticeable observation is the percentage of the departmental and non-departmental elective course unit’s total workload over 240 ECTS in both POUBS (24.64%) and FOUBS (25.44%). The most likely reason for this formation is the proposal of CoHE to Turkish higher education institutions to allocate at least 25 percent of the total ECTS credits in their programmes to elective courses to provide cultural depth and opportunity to give knowledge in different disciplines to the students. Although both school types place strong emphasis on departmental elective courses, the mean student workload of the total non-departmental elective course units in FOUBS is 3.82 times higher than the POUBS. Percentages of each of the departmental electives, management and organization, and quantitative methods CRGs’ student workloads over 240 ECTS are higher than 10 percent for both school types.

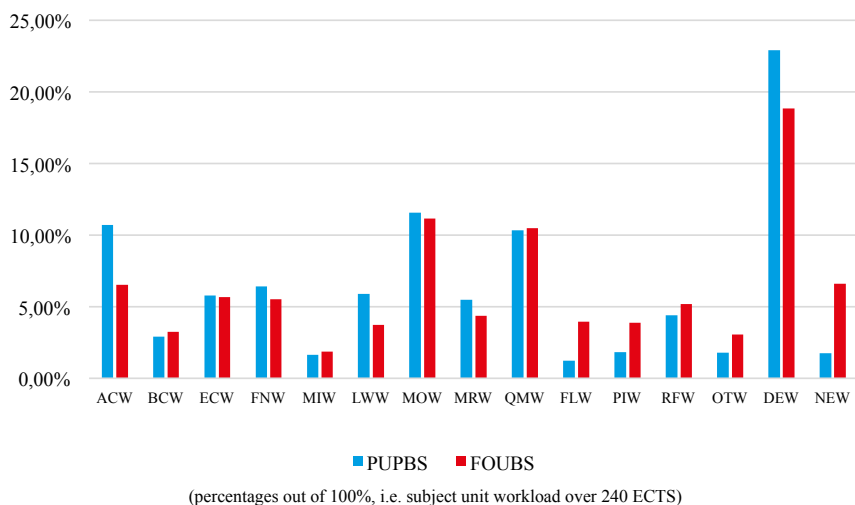


Figure 1

Subject group profile in PUPBS and FOUBS in terms of ECTS workload

From Table 6 and Figure 2, it can be observed that the workloads of TRIBS and FLIBS students are equal at economics CRG, and the ECTS differences are relatively low (below 5 ECTS) in 10 of 15 CRGs. The most noticeable observation is that the accounting CRG mean workload of TRIBS students is 9.42 ECTS higher than that of TRIBS students. In terms of non-

departmental electives, FLIBS students' mean workload is 6.17 ECTS higher than those in TRIBS. As in PUPBS and FOUBS, percentages of each of departmental electives, management and organization, and quantitative methods CRGs' student workloads over 240 ECTS are higher than 10 percent for both TRIBS and FLIBS.

Table 6
Student workload descriptive statistics of TRIBS and FLIBS

	TRIBS				FLIBS				Differences	
	x_{min}	x_{max}	\bar{x}	(%)	x_{min}	x_{max}	\bar{x}	(%)	$d_{(%)}$	d ECTS
ACW	4.00	47.00	25.39	10.58	6.00	50.00	15.96	6.65	3.93	9.42
BSW	0.00	19.00	6.96	2.90	0.00	19.00	7.85	3.27	-0.37	-0.89
ECW	3.00	28.00	13.80	5.75	0.00	32.00	13.80	5.75	0.00	0.00
FNW	0.00	32.00	15.46	6.44	5.00	27.00	13.09	5.45	0.99	2.38
MIW	0.00	15.00	3.67	1.53	0.00	16.00	5.22	2.17	-0.65	-1.55
LWW	2.00	39.00	14.26	5.94	0.00	22.00	8.41	3.51	2.44	5.85
MOW	7.00	71.50	26.30	10.96	10.00	47.00	30.51	12.71	-1.76	-4.22
MRW	0.00	31.00	12.88	5.37	4.00	27.00	11.15	4.64	0.72	1.73
QMW	7.00	44.00	25.06	10.44	12.00	38.00	24.54	10.22	0.22	0.52
FLW	0.00	44.00	3.30	1.38	0.00	48.00	8.98	3.74	-2.36	-5.67
PIW	0.00	52.00	5.29	2.21	0.00	35.00	7.28	3.03	-0.83	-1.99
RFW	0.00	34.00	11.06	4.61	0.00	30.00	11.20	4.66	-0.06	-0.14
OTW	0.00	22.00	4.02	1.67	0.00	49.00	8.20	3.41	-1.74	-4.18
DEW	0.00	114.00	52.10	21.71	0.00	87.00	52.20	21.75	-0.04	-0.09
NEW	0.00	62.00	5.86	2.44	0.00	50.00	12.02	5.01	-2.57	-6.17

x_{min} and x_{max} represent minimum and maximum values respectively. \bar{x} is the sample mean. s stands for sample standard deviation. (%) represents the percentage of the CRGs' workload total over 240 ECTS. $d_{(%)}$ is the difference between the percentages (each subject unit's workload total over 240 ECTS) of TRIBS and FLIBS. d ECTS display the percentage difference translated into ECTS.

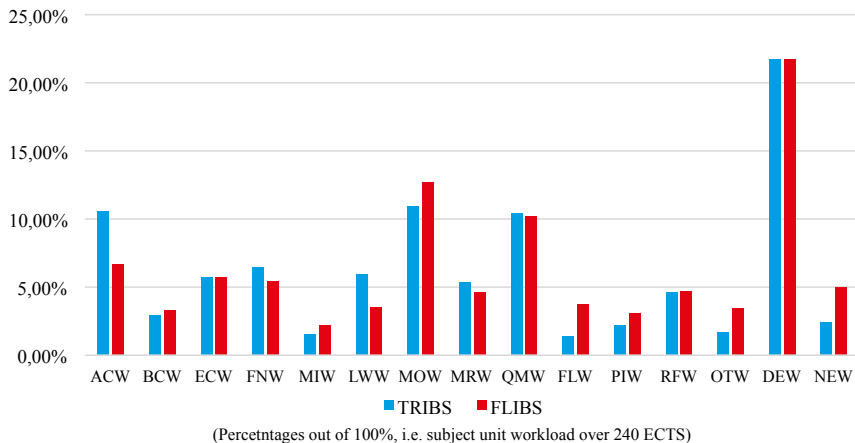


Figure 2

Subject group profile in TRIBS and FLIBS in terms of ECTS workload

III.2. Outputs of MANOVA

As we saw above, the results of our study are given in terms of the means of the dependent variables and their differences in each CRG for both independent variables. However, this is not enough to validate possibly found mean differences. The MANOVA package includes the so-called tests, which allow the correct interpretation either confirming or not confirming the meaningfulness of the results. Without entering the appropriate details, the MANOVA package may rely on at least four different tests, among which we prefer to use the Pillai's trace test. As the other tests, our preferred test yields two additional numbers: the test statistic F (also named coefficient F) and the associated probability value p . These two values must be read and assessed together. In the case of Pillai's trace test, if F is in the interval from 0 to 1, we cannot exclude the Null Hypothesis, i.e., that the result — i.e., the mean difference — doesn't tell us anything. Otherwise, ($F > 1$) we may be on the correct path to detecting a meaningful difference: then we have to check the value of p , which — if lower than an appropriate value (e.g., 0.05 or 0.01) — confirms that the result is meaningful. The Pillai's trace statistics for POUBS – FOUBS ($F = 2,151.37$, $p = 0.000$) and TRIBS – FLIBS ($F = 2,211.49$, $p = 0.000$) indicate that there are significant differences between school types in terms of the total workload of a student and the number of course units offered in CRGs.

We now present the pairwise MANOVA results (Table 7) for POUBS – FOUBS, revealing significant differences in the number of course units and in the student workloads: the found differences are respectively 11 and 8 out of the 15 CRGs. While the POUBS in Turkey include significantly in their programmes a higher number of course units in accounting, economics, finance, law, marketing, and quantitative methods CRGs than FOUBS, the number of course units offered in foreign languages, project–seminar–internship, other courses and non–departmental elective CGSs are significantly less in PUPBS compared with FOUBS. The findings reveal that the differences between PUPBS and FOUBS in behavioural sciences, management information systems, management and organization, and others related to field CRGs are not meaningful in terms of both variables. Moreover, the workloads of students at PUPBS and FOUBS in economics, finance, and quantitative methods CGSs do not differ significantly. The student workloads of PUPBS are significantly lighter than FOUBS in foreign languages, project–seminar–internship, other courses, departmental and non–departmental electives, and heavier in accounting, economics, law and marketing courses CRGs.

Table 7

Relationships between pairs of means (PUPBS – FOUBS)

Number of Course Units				Student Workload (ECTS)			
Dep. Var.	F	p	d ₋	Dep. Var.	F	p	d ₋
ACC	56.500**	0.000	2.199	ACW	41.881**	0.000	10.062
BSC	0.875	0.351	–	BSW	1.470	0.227	–
ECC	10.751**	0.001	0.609	ECW	0.052	0.821	–
FNC	10.341**	0.002	0.693	FNW	3.648	0.058	–
MIC	1,193.000	0.277	–	MIW	0.765	0.383	–
LWC	33.811**	0.000	1.464	LWW	23.352**	0.000	5.266
MOC	2,101.000	0.149	–	MOW	0.299	0.585	–
MRC	15.135**	0.000	0.769	MRW	6.632*	0.011	2.694
QMC	8.947**	0.003	0.701	QMW	0.064	0.801	–
FLC	22.050**	0.000	–1.733	FLW	20.055**	0.000	–6.508
PIC	6.858**	0.010	–0.539	PIW	8.878**	0.003	–4.868

Number of Course Units				Student Workload (ECTS)			
Dep. Var.	F	p	d ₋	Dep. Var.	F	p	d ₋
RFC	0.621	0.432	–	RFW	3.457	0.065	–
OTC	7.224**	0.008	–0.767	OTW	7.385**	0.007	–3.093
DEC	16.152**	0.000	2.831	DEW	7.767**	0.006	9.781
NEC	24.446**	0.000	–2.400	NEW	28.193**	0.000	–11.674

d₋ is the mean difference (PUPBS – FOUBS). ** is very significant (p = 0.000 to 0.01), and * is significant (p = 0.01 to 0.05). No asterisk means that the coefficient is not significant at 0.05 level.

Table 8
Relationships between pairs of means (TRIBS – FLIBS)

Number of Course Units				Student Workload (Credits)			
Dep. Var.	F	p	d ₋	Dep. Var.	F	p	d ₋
ACC	51.969**	0.000	2.164	ACW	34.235**	0.000	9.423
BSC	0.441	0.508	–	BSW	1,838.000	0.177	–
ECC	6.056*	0.015	0.471	ECW	0.001	0.998	–
FNC	11.940**	0.001	0.751	FNW	4.427*	0.037	2.377
MIC	0.012	0.913	–	MIW	7.069**	0.009	–1.550
LWC	39.257**	0.000	1.576	LWW	28.928**	0.000	5.850
MOC	2,488.000	0.117	–	MOW	5.765*	0.018	–4.215
MRC	8.152*	0.005	0.586	MRW	2,589.000	0.110	–
QMC	11.061**	0.001	0.786	QMW	0.201	0.655	–
FLC	11.191**	0.001	–1.295	FLW	14.298**	0.000	–5.674
PIC	4.496*	0.036	–0.446	PIW	1,369.000	0.244	–
RFC	0.443	0.507	–	RFW	0.017	0.897	–
OTC	7.975**	0.005	–0.815	OTW	13.618**	0.000	–4.176
DEC	2,175.000	0.142	–	DEW	0.001	0.980	–
NEC	2,937.000	0.089	–	NEW	6.695*	0.011	–6.166

d₋ is the mean difference (TRIBS – FLIBS). ** is very significant (p = 0.000 to 0.01), and * is significant (p = 0.01 to 0.05). No asterisk means that the coefficient is not significant at 0.05 level.

Again, in order to validate the differences in the number of course units and student workloads in each CRG, a second pairwise MANOVA was applied to the data of first cycle degree programmes in business using Turkish and a foreign language as the medium of instruction. The findings presented in Table 8 reveal significant differences in 9 and 8 of the 15 CRGs in terms of the number of course units and the student workloads, respectively. The number of courses offered by TRIBS in 5 CRGs (accounting, economics, finance, law, marketing) is significantly higher, and in 3 CRGs (foreign language, project–seminar–internship, others) lighter than FLIBS. CRGs that do not differ between the TRIBS and FLIBS in terms of the number of course units offered are behavioural sciences, management information systems, management and organization, other courses related to the field, departmental electives, and non–departmental electives. Although the workload of management information systems, management and organization, foreign languages, others, and non–departmental electives CRGs are significantly lighter for the students at the TRIBS, their workload is heavier in accounting, finance, and law CRGs than the students at FLIBS. The differences regarding student workloads between the behavioural sciences, other courses related to the field, and departmental electives CRGs are not meaningful between TRIBS and FLIBS.

IV. Discussion

Rapid changes in technology and the economy, competitive pressure in the global environment, developments in the field of financial reporting and auditing have affected the content of business activities as well as the accounting process in businesses, and the importance of accounting information and reports has increased. Accordingly, there is a need for professional accountants who can carry out the accounting and financial reporting activities of the companies effectively and who have a good command of national and international regulations. Accounting courses curricula should be set to ensure that students receive an education that prepares them to begin careers as accounting professionals.²⁷ Although there is no business school that does not include accounting course in its curricula, results of the study have shown that one of the most distinctive CRG between the first cycle degree programmes in business in Turkey is accounting. In

²⁷ Timothy J. Fogarty, “Surrender Dorothy? A commentary on Rebele and St. Pierre,” *Journal of Accounting Education* 48, (December 2019): 71–79, <https://doi.org/10.1016/j.jaccedu.2019.100637>.

terms of both the number of courses and student workload, PUPBS and TRIBS differ significantly from FOUBS and FLIBS respectively.

According to a number of scholars, behavioural science courses should be included in business schools' curriculum to provide the students a convincing explanation of why behavioural factors such as organizational culture, employee and customer relations, intercultural communication, and organizational learning are among the foundation of sustainable competitive advantage in businesses.^{28, 29, 30, 31} There is no significant difference between business schools in Turkey in the behavioural science CRG in terms of the number of course units and student workload. However, there are no more than three behavioural science course units in the curricula of the first cycle degree programmes in business: this fact occurs for $n = 6$, while 11 schools do not include any course units in behavioural science CRG in their curricula.

Economics is of considerable importance to businesses and business is one of the primary centres of economic power.³² While economics is primarily concerned with the concepts of scarcity and opportunity costs, the challenges and success of economic systems and their impact on the living standards of society, business deals particularly with organising and allocating a firm's scarce resources so as to achieve the objective of the individual firm which generally creates maximisation of its profits. In this context, economics is considered as one of the CRGs that must be included in a business school's curricula. Outputs of the research on economics CRG reveal that there is no significant difference between business schools in Turkey except for the difference between public and foundation first cycle programmes in business in terms of number of course units, where public first cycle degree programmes in business offer more economics courses than foundation first cycle programmes.

Whether it is a large multinational company or a local micro business, finance is considered as the core of decision-making and without financial

²⁸ Sara L. Rynes, and Christine Q. Trank, "Behavioral Science in the Business School Curriculum: Teaching in A Changing Institutional Environment," *Academy of Management Review* 24, no. 4 (1999): 808–824, <https://doi.org/10.5465/amr.1999.2553255>.

²⁹ Mark A. Huselid, "The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance," *Academy of Management Journal* 38, no. 3 (1995): 635–672, <https://doi.org/10.5465/256741>.

³⁰ Frederick F. Reichheld, *The Loyalty Effect: The Hidden Force Behind Growth, Profits, and Lasting Value* (Boston: Harvard Business School Press, 1998)

³¹ Theresa M. Welbourne, and Alice O. Andrews, "Predicting the Performance of Initial Public Offerings: Should Human Resource Management Be in the Equation?" *Academy of Management Journal* 39, no. 4 (1996): 891–919, <https://doi.org/10.5465/256716>.

³² John P. Owen, "The Role of Economics in Education for Business Administration," *Southern Economic Journal* 24, no. 2 (1958): 353–361, <https://doi.org/10.2307/1055067>.

management a business cannot exist. In addition, students make small or large financial decisions in their lives both in university and after graduation just as businesses make on a daily, weekly, and yearly basis. It is determined that the curriculum of all first cycle degree programmes in business in Turkey include at least one finance course unit. The results reveal that the curricula of PUPBS and TRIBS include more finance course units than FOUBS and FLIBS respectively, and a TRIBS student's workload is significantly heavier than a FLIBS student.

Effective use of information systems is one of the keys to success in all organizations, whether they are for-profit or not-for-profit organizations. In this respect, the curriculum of management information systems courses mainly focuses on the business applications of technology. However, the management information systems courses' curricula should be updated regularly in line with the rapid and significant technological changes, new business models and processes. In addition, the students must have gained the skills to regularly update their knowledge after graduation so not to quickly become obsolete in the workforce.³³ The only difference in the management information systems CRG is that the student workload is significantly heavier in FLIBS than TRIBS. As in the behavioural sciences CRG, there is no more than three management information systems course units in the curricula of business schools ($n = 6$) in Turkey. Thirty-one of the business schools do not include any management information systems course units in their curricula.

Law is a core requirement at most competitive first cycle degree programmes in business and essential to educating successful professionals, managers, and leaders of the future. This basic tenet is reflected in the presence of business law in the core as well as in the elective curriculum at the top thirty first cycle degree programmes in business ranked by Bloomberg Business Week, as it is nearly universal that these schools include course unit(s) in law in the core curriculum.³⁴ Although there is no first cycle degree programme in business in Turkey that does not include law course units in their curricula, one of the most distinctive CRGs which significantly differs

³³ Rassule Hadidi, and Daniel Power, "Management Information Systems (MIS) Curricula Development, Management, And Delivery - Possible Sharing Economy Solutions," *Journal of the Midwest Association for Information Systems* 1, (2019): 1–9, <https://aisel.aisnet.org/jmwais/vol2019/iss1/1>.

³⁴ Christine Neylon O'Brien, Richard E. Powers, and Thomas L. Wesner, "Benchmarking and Accreditation Goals Support the Value of an Undergraduate Business Law Core Course," *Journal of Legal Studies Education* 35, no. 1 (2018): 171–189, <https://doi.org/10.1111/jlse.12074>.

between business schools in terms of number of course units and student workload variables is law. In terms of both independent variables, it was determined that the public first cycle degree programmes in business and those using Turkish as the medium of instruction differs from the foundation business schools and those using a foreign language as the medium of instruction, respectively.

Management refers to all activities which enable employees to cooperate and direct them towards a purpose. Organization is important for employees to play an active role in accordance with their structure and to work harmoniously with other employees. Organization management in a business refers to the art of bringing people together in a common platform to ensure that they work towards a predefined common goal. Organization management ensures optimum use of resources through rigorous planning and control in the workplace. The only differentiation in the management and organization CRG is that the workload of the students of TRIBS is significantly heavier than the students of FLIBS. The highest number of course units are included in management and organization among CRGs.

Conceptual and theoretical knowledge of the marketing field can be useful for long term. However, professional and technical skills are changing rapidly, especially due to the speed of change in technology. For example, many of the techniques currently used for database marketing are different from those five years ago, and most likely five years from now will differ from those used today. Businesses demand graduates who can use technology in a scalable way to implement their strategies and operations³⁵. Marketing is one of the CRGs where significant differences were revealed between business schools' curricula in Turkey. In the marketing CRG, the number of course units offered by PUPBS is significantly higher, and the workload of students of PUPBS is heavier than FOUBS students. Although there is no significant difference between TRIBS and FLIBS in terms of student workload, the number of marketing course units offered in TRIBS is significantly higher than FLIBS.

The importance of quantitative methods in terms of objective and conscious decision making is indisputable. From this point of view, the effectiveness of businesses using these techniques becomes important in increasing their competitiveness. The primary goal of the quantitative methods courses is teaching mathematics, statistics, econometrics, and other

³⁵ Regina Pefanis Schlee, and Katrin R. Harich, "Knowledge and Skill Requirements for Marketing Jobs in the 21st Century," *Journal of Marketing Education* 32, no. 3 (2010): 341–352, <https://doi.org/10.1177/0273475310380881>.

data analytics courses in the field of business to improve students' practical skills so they can apply this knowledge in the business functions. Although the outputs of the research reveal that there is no significant difference between first cycle degree programmes in business in Turkey in terms of student workload variable, in terms of the total number of course units' significant differences were determined in both school types. PUPBS offer significantly more quantitative methods course units than FOUBS, and the curricula of TRIBS significantly include more quantitative methods course units than FLIBS.

Internships, which provide students with the opportunity to apply knowledge gained from the classroom and help to develop essential skills such as critical thinking, communication, and problem solving, increase their marketability.³⁶ Projects help students to improve their designing, imagining, planning, and constructing skills as well. It also makes the student the central focus by establishing an interdisciplinary connection.³⁷ In Turkey, the workload of students at FOUBS for projects, seminars and internships are significantly heavier than the students of PUPBS.

Elective courses not only help students get more knowledge about their core fields, but also help them to recognize and test their interests and abilities, and develop skills in various fields. CoHE encourages Turkish higher education institutions to allocate at least 25 percent of the total ECTS credits in their programmes to elective courses to provide cultural depth and opportunity to get knowledge in different disciplines to the students. On the examination of the research results regarding the departmental electives which support core courses, it is seen that there are no significant differences between TRIBS and FLIBS in terms of both variables. On the other hand, the number of departmental elective course units offered to the students by PUPBS in Turkey is significantly higher than FOUBS. The opposite is the case for non-departmental elective courses, and the curricula of foundation business schools include significantly more non-departmental elective course units. While the students' workloads for non-departmental elective courses are significantly heavier in FOUBS than PUPBS, the workloads of the students of FLIBS are significantly heavier than the students of TRIBS.

³⁶ Mamie Griffin, and Pedro Coelho, "Business Students' Perspectives on Employability Skills Post Internship Experience: Lessons from the UAE," *Higher Education, Skills and Work-Based Learning* 9, no. 1 (2019): 60–75, <https://doi.org/10.1108/HESWBL-12-2017-0102>.

³⁷ Nurdan Kalaycı, "An Application Related to Project Based Learning in Higher Education Analysis in Terms of Students Directing the Project," *Education and Science* 33, no. 147 (2008): 85–105, <http://egitimvebilim.ted.org.tr/index.php/EB/article/view/691/139>.

V. Conclusions

In this study, the differences between the curricula of first cycle degree business schools in Turkey were explored in terms of the number of course units and student workload. In the first stage, business schools' course information packages were examined, and it was seen that there are 147 schools that provide sufficient data. In the following stage, the number of course units and the total student workload in each content-related group were determined within the scope of the European Credit Transfer System. Finally, first cycle business schools in Turkey were subjected to multivariate analysis in terms of the total number of course units and total student workloads for each content-related group.

The results of the study using the multivariate analysis approach show that the number of accounting, economics, finance, law, marketing, and quantitative methods course units offered in public first cycle degree programmes in business in Turkey is significantly higher than foundation first cycle degree programmes in business. On the other hand, the curricula of foundation business schools in Turkey include significantly more course units in foreign language, project – seminar – internship, other courses, and non-departmental electives content-related groups than in public business schools. Student workloads, which is the other dependent variable used in the research, is significantly heavier in accounting, economics, law, marketing content-related groups in public first cycle degree programmes in business in Turkey. And foundation business schools' student workloads for foreign language, project – seminar – internship, other courses, departmental and non-departmental electives content-related groups are heavier. Those which do not differ significantly between public and foundation first cycle degree programmes in business in terms of both dependent variables are behavioural sciences, management information systems, management and organization, and others related to field content-related groups.

The second multivariate analysis has been conducted between the business schools using Turkish and a foreign language as the medium of instruction. While the number of course units offered in accounting, economics, finance, law, marketing, and quantitative methods content-related groups are significantly higher in the business schools using Turkish as a medium of instruction, the business schools using a foreign language as the medium of instruction offer significantly more course units in management and organization, foreign language, project – seminar – internship, and departmental electives content-related groups. While the workload of finance and law content-related groups are heavier for the students at the business schools using Turkish as the medium of instruction, the students at

the business schools using a foreign language as the medium of instruction have a heavier workload for management and information systems, management and organization, foreign language and non-departmental electives content related groups. The differences in behavioural sciences, other courses related to the field, and departmental electives content related groups are not significant in terms of both variables.

The findings of this study indicating significant differences between public and foundation business schools, and between business schools using Turkish and a foreign language as a medium of instruction are not unexpected as their aims, structures, contents, and subject-specific and general learning outcomes may diverge. Tuning EU does not propose one single standard for the aims, structures, contents, and subject-specific and generic learning outcomes that should be achieved due to the universal characteristics and multidisciplinary nature of business schools. Considering the differences of the weights of the total ECTS's and the total number of course units offered in the content related areas, it can be said that Turkey's first cycle programmes in business quantitatively adopt this proposal. However, what makes a business degree programme transparent and comparable is not only adopting the European Credit Transfer and Accumulation System, but it is also associated with the learning outcomes and competencies of the subject areas and course units. In the Tuning project, the knowledge level expected to be gained by a graduate, what s/he can understand and give practical exhibition and explanation are expressed as the learning outcomes. Competencies, in which learning outcomes are subsumed, are developed in each course unit in a programme, and represent a combination of attributes including cognitive and meta-cognitive skills, knowledge and understanding, interpersonal, intellectual and practical skills, and ethical values. In this respect, comparative studies between business schools in terms of competencies and learning outcomes, teaching-learning processes and assessment methods will complement this research.

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