

## ACCREDITED PROJECT EFFICIENCY OF STATE UNIVERSITIES IN TURKEY

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**Abstract:** One of the most important functions of universities is to produce knowledge by making scientific projects and to ensure the transfer of the knowledge produced to different sectors. Universities in developed countries have a very high level of social contribution in this area. Within the scope of this study, the project numbers and budgets of the state universities in Turkey, supported by the Scientific and Technological Research Council of Turkey and the General Directorate of Science and Technology of the Ministry of Science, Industry and technology were evaluated. In short, these are described as “TUBITAK project“ and “San-TEZ project”, respectively. The numbers and budgets of these projects in 2010, 2011, 2012 and 2013 were examined on the basis of University categories. The study has shown that averagely forty percent of the accredited projects produced by universities in Turkey belongs to nine universities (İstanbul, İstanbul Teknik, Ankara, Ege, Karadeniz Teknik, Orta Dogu Teknik, Ataturk, Hacettepe and Bogazici), which are in the A-category according to the year of establishment. This proportion increases further in favor of A-Category universities, when considered the efficiency of projects.

**Keywords:** Project efficiency, higher education, state university, university category

### Introduction

Currently, information is one of the most important and essential needs that affect social life in the developed countries. Knowledge-based technology can be produced in the environment in which universities are located. The process of transferring is the last step of multi-stage operation. When this innovative spirit and entrepreneurial enterprise are combined, the information is revealed and transferred to meet the needs of different sectors. This process can be carried out in the most accurate way on the basis of project support. It is possible to execute this operation by universities in the area where project support is the most efficient. In other words, universities should be an higher education institution to be integrated with the industry and producing information rather than the institutions that carry out classical education and training services, In developed countries mostly transform their researches to the society. Universities in relevant countries are supported by the governments in order to transform and accelerate transformation, which is considered as a strategic change.

It should be noted that state support for North American universities is largely towards to research and development projects. It has been stated that should be followed in detail how the results are reflected in society. Winston (1998) stated that the transformation in universities must be ensured and that higher education institutions must not be managed like a company and underlined that certain balances within the institution must be absolutely protected. For this reason, author thinks that studies have been carried out and methods have been proposed which include specific evaluation criteria in order to make the universities more effective and productive (Tosun, 2004, 2006, 2011, 2015, 2016, 2019a and 2019b). In the developed countries, there are various thoughts about project support to the universities (Brown, 1997; Harazama, 1998; Noll, 1998 and Williams, 2000).

As of the end of 2019, there are 130 state universities across the country, and the number of qualified projects supported per year for working period of this study is 1204. For the universities taken into account within the scope of this study, the average number of qualified projects per year is 11.7. But this ratio differs from university to university. Therefore, the project effectiveness of universities in this study was determined according to the university categories classified by the author. In this study, the project efficiency of state universities are discussed and the university categories proposed by the author are evaluated on the basis of accredited projects. At the end of the study, it is recommended that a certain part of Central government budget should be based on the project efficiency on the view of performance assessment process.

### Materials and Methods

In this study, projects supported by two institutions with serious evaluation criteria were taken into account. The number and budgets of projects supported by the Turkish Scientific and Technological Research Institution (TUBITAK) and the General Directorate of Science and Technology of the Ministry of Science, Industry and technology were evaluated. In this context, the related projects were defined as” TUBITAK project “and” San-TEZ project”, respectively. TUBITAK is a public organization established by Law No. 278, which entered into force in 1963, in order to support and encourage research and development activities carried out by University, public and private sector institutions and organizations. This organization tries to spread the culture of science, to help for forming a society at peace with science and technology and to encourage the institutions for the projects submitted under the different programs by providing financial support. It also provides financial support to industry and cooperated international projects. In addition to TUBITAK, the Ministry of Science, Industry and Technology supports joint projects with industry. The relevant institution supports projects to be carried out in

order to enable core and small industrial organizations, which make up an important part of the industry, to gain a culture of research and development and innovation and to solve their problems by using the knowledge generated in universities with the Industrial theses program, which is briefly defined as SAN-TEZ. The projects which are supported by these two organizations are defined as well-accredited projects in Turkey. Therefore, only these projects have been considered for this study.

In developed countries, project support provided by the state is carried out according to the category in which the university is located and continued according to the performance of the universities. But such a situation does not exist in Turkey. In this study, all state universities in the country were classified into six separate categories, taking into account the years of establishment of the university. The main reason for creating categories according to the year of establishment is that universities are funded largely from the state budget, they invest with the government support they receive, and these investments constitute a significant accumulation depending on the years. Table 1 introduces the categories of state universities, established between 1933 and 2011 in Turkey. In Turkey. The hundred-three state universities were established between 1933 and 2011 during the republic period. In this study, the financial resources of state universities were discussed on the basis of the categories defined in Table 1.

**Table 1.** The categories of State Universities on the basis of collage age.

Category	Number of Universities	Range for establishment year	The Covered Universities
A	9	1933-1971	İstanbul, İstanbul Teknik, Ankara, Ege, Karadeniz Teknik, Orta Doğu Teknik, Atatürk, Hacettepe and Boğaziçi.
B	10	1973-1978	Anadolu, Çukurova, Dicle, Cumhuriyet, Fırat, İnönü, Ondokuz Mayıs, Selçuk, Uludağ and Erciyes.
C	9	1982-1987	Akdeniz, Dokuz Eylül, Gazi, Marmara, Mimar Sinan Güzel Sanatlar, Trakya, Yıldız Teknik, Yüzüncü Yıl and Gaziantep.
D	25	1992-1994	Abant İzzet Baysal, Adnan Menderes, Afyon Kocatepe, Balıkesir, Bülent Ecevit, Celal Bayar, Çanakkale Onsekiz Mart, Dumlupınar, Gaziosmanpaşa, Gebze Yüksek Teknoloji, Harran, İzmir Yüksek Teknoloji, Kafkas, Kahramanmaraş Sütçü İmam, Kırıkkale, Kocaeli, Mersin, Muğla, Mustafa Kemal, Niğde, Pamukkale, Sakarya, Süleyman Demirel, Eskişehir Osmangazi and Galatasaray.
E	41	2006-2008	Adıyaman, Ahi Evran, Aksaray, Amasya, Bozok, Düzce, Erzincan, Giresun, Hitit, Kastamonu, Mehmet Akif Ersoy, Namık Kemal, Ordu, Recep Tayyip Erdoğan, Uşak, Ağrı İbrahim Çeçen, Artvin Çoruh, Batman, Bilecik Şeyh Edebali, Bingöl, Bitlis Eren, Çankırı Karatekin, Karabük, Karamanoğlu Mehmetbey, Kırklareli, Kilis 7 Aralık, Mardin Artuklu, Muş Alparslan, Nevşehir, Osmaniye Korkut Ata, Siirt, Sinop, Ardahan, Bartın, Bayburt, Gümüşhane, Hakkâri, Iğdır, Şırnak, Tunceli and Yalova.
F	9	2010-2011	Abdullah Gül, Bursa Teknik, Erzurum Teknik, İstanbul Medeniyet, İzmir Kâtip Çelebi, Necmettin Erbakan, Türk-Alman, Yıldırım Beyazıt, Adana Bilim ve Teknoloji.

## Results and Discussion

As part of this study, the numbers and amounts of projects belonging to state universities in Turkey, supported by the Turkish Scientific and Technological Research Institution and the Ministry of Science, Industry and Technology, were evaluated. Data on the project numbers and project amounts in 2010, 2011, 2012 and 2013 for these projects, which are briefly called “TUBITAK project” and “SAN-TEZ project”, are presented in detail in Tosun (2015).

In 2010 and 2011, TUBITAK supported 1 021 and 995 projects, respectively, and a total amount of these projects were 168 825 400 and 158 191 500 TL for two years. In 2012 and 2013, 890 and 1361 projects were supported by the same institution, respectively, and total amount of 141 759 200 TL and 206 079 359 TL were contributed to these projects in the relevant years. During four-years period, the largest number of projects generally belong to Middle East Technical, Aegean, Hacettepe, Istanbul Technical, Ankara and Boğaziçi universities. The change in the number and amount of projects supported by TUBITAK for the defined categories is presented in Table 2. A graphical representation of the relevant data is shown in Figure 1. The most productive universities in terms of number of projects are in Category A. These universities have 39.0 percent of the projects

supported by TUBITAK. In terms of project cost, the rate for the same category are too higher than that of number of projects (45.2 percent). The rates for Category D are 25.3 and 22.6 percent on average in terms of the number and the amount of the projects. The rates of universities in the category E, established between 2006-2008, are quite low (7.1 and 5.0 percent), although their rates have increased relatively in recent years.

**Table 2.** Number of the TUBITAK projects and total project amount on the basis of university categories

University Categories	2010		2011		2012		2013	
	Number of Project (Project amount in TL)	Rate (%)	Number of Project (Project amount in TL)	Rate (%)	Number of Project (Project amount in TL)	Rate (%)	Number of Project (Project amount in TL)	Rate (%)
A-Category (9 universities)	423 (83.105.900)	41,4 (49,2)	392 (72.237.800)	39,4 (45,7)	339 (61.471.100)	38,1 (43,4)	502 (87.694.604,34)	36,9 (42,6)
B-Category (10 universities)	164 (23.271.800)	16,1 (13,8)	133 (20.978.900)	13,4 (13,3)	115 (17.863.700)	12,9 (12,6)	186 (27.545.481)	13,6 (13,3)
C-Category (9 universities)	129 (20.139.900)	12,6 (11,9)	145 (22.130.900)	14,6 (14,0)	127 (20.287.200)	14,3 (14,3)	193 (27.555.775,97)	14,2 (13,4)
D-Category (25 universities)	239 (36.790.600)	23,4 (21,8)	263 (35.548.400)	26,4 (22,4)	236 (34.365.100)	26,5 (24,2)	336 (44.984.232,68)	24,7 (21,8)
E-Category (41 universities)	66 (5.517.200)	6,5 (3,3)	60 (7.019.500)	6 (4,4)	68 (6.880.600)	7,6 (4,9)	114 (14.809.765,80)	8,4 (7,2)
F-Category (9 universities)	0 (0)	0,0 (0,0)	2 (276.000)	0,2 (0,2)	5 (891.500)	0,6 (0,6)	30 (3.489.499,40)	2,2 (1,7)
Total	1021 (168.825.400)	100 (100)	995 (158.191.500)	100 (100)	890 (141.759.200)	100 (100)	1361 (206.079.359)	100 (100)

In short, the Industrial Thesis Program, defined as SAN-TEZ, provides support to industry-university joint projects in order to ensure the development with science and technology. The number of supported projects and their amounts are presented in Tosun (2015). In 2010 and 2011, 94 and 154 projects of universities were supported within the scope of SAN-TEZ, respectively, and a total of 43 797 568 TL and 78 250 200 TL were contributed to these projects in these years. In 2012 and 2013, 118 and 183 projects were supported, respectively, and these projects were supported by 34 474 853 TL and 51 401 096 TL during these years. The largest number of projects for the working years belong to Middle East Technical, Gazi, Istanbul Technical, Hacettepe, Ege and Dokuz Eylül universities.

The numbers of amounts of projects, supported within the scope of SAN-TEZ Program, are presented in Table 3. The change of the relevant data by year is given in Figure 2.

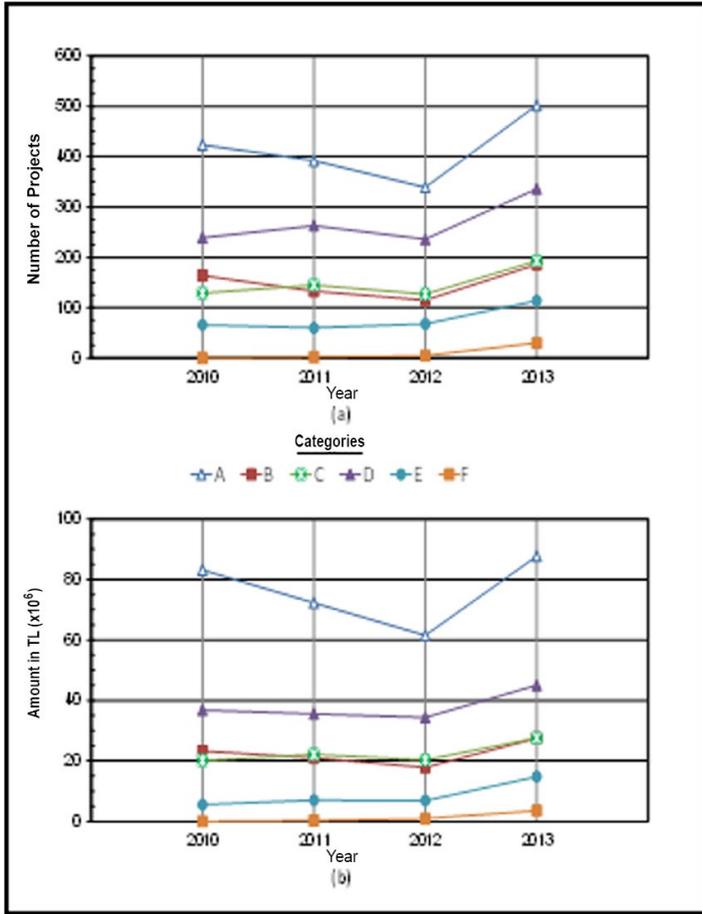
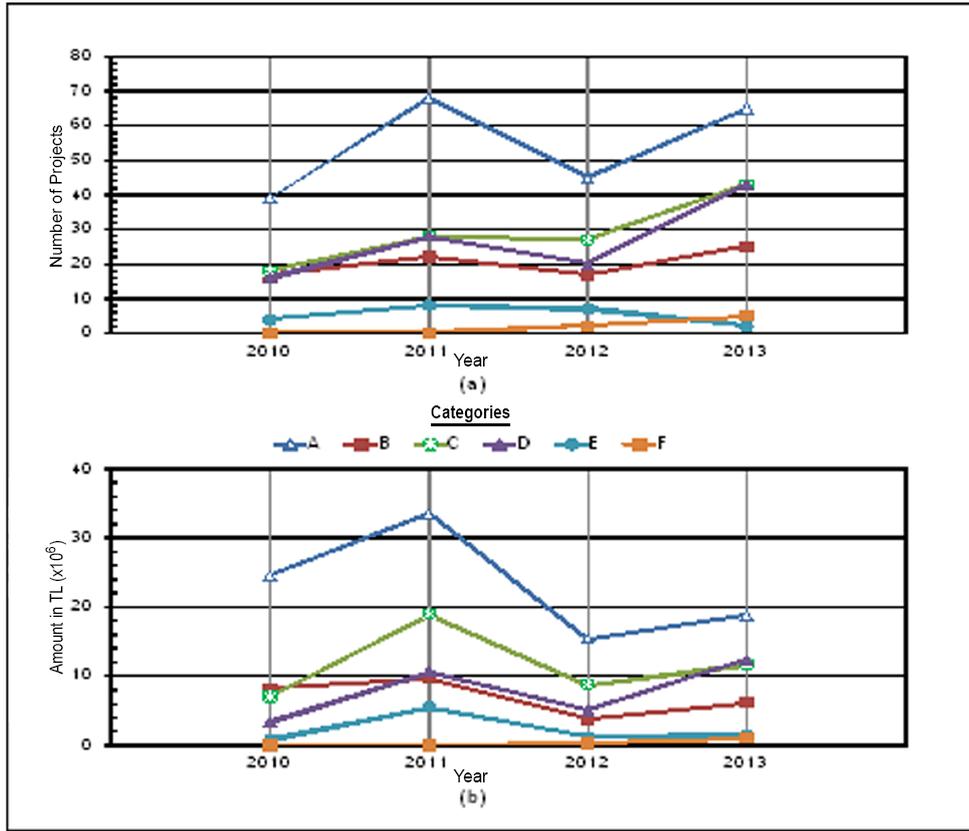


Figure 1. Number of and amount of total TUBITAK projects on the basis of university categories: (a) number of the projects and (b) amount of projects.

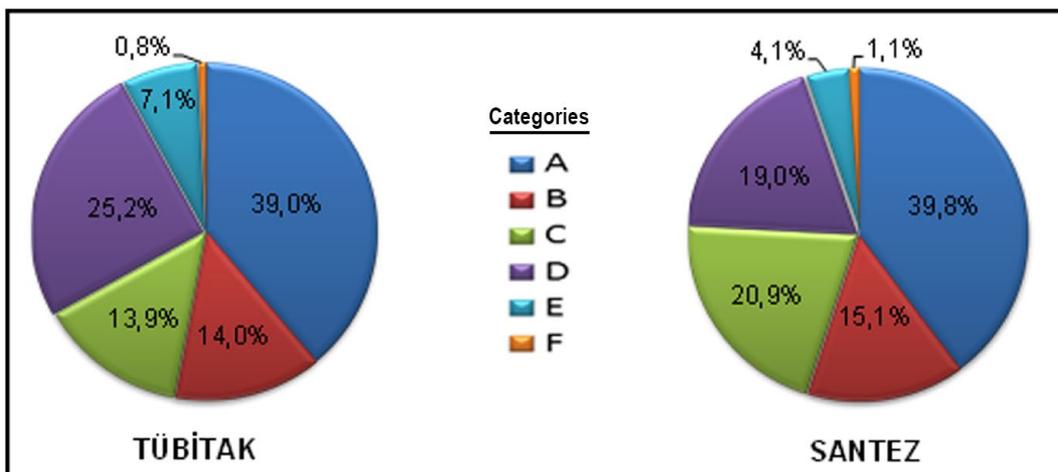
Table 3. Number of the SANTEZ projects and total project amount on the basis of university categories

University Categories	2010		2011		2012		2013	
	Number of Project (Project amount in TL)	Rate (%)	Number of Project (Project amount in TL)	Rate (%)	Number of Project (Project amount in TL)	Rate (%)	Number of Project (Project amount in TL)	Rate (%)
A-Category (9 universities)	39 (24.530.776)	41,5 (56,0)	68 (33.478.642)	44,2 (42,8)	45 (15.407.109)	38,1 (44,7)	65 (18.768.712)	35,5 (36,5)
B-Category (10 universities)	17 (8.206.398)	18,1 (18,7)	22 (9.662.341)	14,2 (12,3)	17 (3.749.229)	14,4 (10,9)	25 (6.124.519)	13,7 (11,9)
C-Category (9 universities)	18 (6.940.747)	19,1 (15,9)	28 (18.969.052)	18,2 (24,2)	27 (8.714.495)	22,9 (25,3)	43 (11.661.364)	23,5 (22,6)
D-Category (25 universities)	16 (3.337.873)	17,0 (7,6)	28 (10.592.356)	18,2 (13,5)	20 (5.122.275)	17,0 (14,6)	43 (12.324.553)	23,5 (24,1)
E-Category (41 universities)	4 (781.774)	4,3 (1,8)	8 (5.547.809)	5,2 (7,1)	7 (1.183.035)	5,9 (3,4)	2 (1.439.249)	1,1 (2,8)
F-Category (9 universities)	0 (0)	0 (0)	0 (0)	0 (0)	2 (298.710)	1,7 (0,9)	5 (1.082.699)	2,7 (2,1)
Total	94 (43.797.568)	100 (100)	154 (78.250.200)	100 (100)	118 (34.474.853)	100 (100)	183 (51.401.096)	100 (100)



**Figure 2.** Number of and amount of total SANTEZ projects on the basis of university categories: (a) number of the projects and (b) amount of projects.

As with TUBITAK Projects, the universities belonging to the category A have the highest realization rates in this context. The nine universities in this category have 39.8 percent of all projects supported during the working years in terms of the number of projects and 45.0 percent in terms of the amount of the project. For Category D, which includes 25 universities, the rates related to the number and amount of the projects were 19.0 and 15.0 percent, respectively. In Category E, which includes 41 universities established between 2006-2008, the number of amount of the projects are quite low (4.1 and 3.8 percent). Figure 3 presents the proportional size of the number of TUBITAK and SAN-TEZ projects according to university categories.



**Figure 3.** Percentages of the numbers of TUBITAK and SANTEZ projects on the basis of university categories.

**Conclusion**

The amount of project-based support for the higher education system in Turkey is very small compared to developed countries. Project support for All Country Universities is less than support for a small research

university in the United States. Currently, project support to universities is a waste of resources in Turkey, even if not a huge amount. Universities often present their projects to create scientific infrastructure facilities. It does not seem possible to provide information production that can compete with the international system. For this purpose, universities or university associations or university-public sector joint venture or university-private sector joint venture etc., must compete for projects accredited by the newly established National Accreditation Agency. In addition, the National Accreditation Institute should call upon projects that it will accredit in subsequent years and establish a project framework that can be supported on a national and international scales. As can be seen from this study, the category-A universities (9 universities) in Turkey should be fully equipped with master's and doctoral programs. Research facilities should be provided for these universities on the specified topics by means of project supports. Government agencies and organizations such as the Ministry of Agriculture and forestry, the Ministry of Science, Industry and Technology and the Ministry of Energy need to finish project support as soon as possible.

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