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A review of university facilities in Turkey
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A review of university facilities in Turkey*

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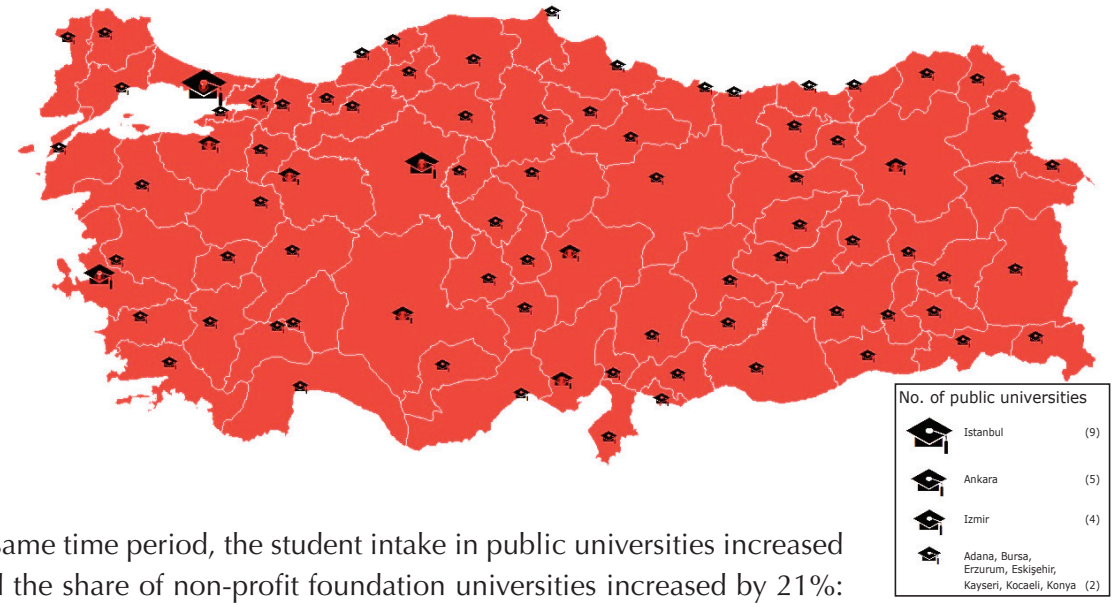
As a result of the massive growth of higher education in Turkey, the most pressing priority for this sector today is to meet the new space requirements for an increasing number of students. Now a subject of public attention more than ever before, the second largest item of expenditure for universities is the construction of physical spaces. This article sets out the key trends and presents the findings of a questionnaire conducted in 2005.

THE GROWTH OF HIGHER EDUCATION

With over 3 million students currently enrolled at university or following distance education courses, Turkey currently has a mass higher education (HE) system. Over the last ten years, in order to facilitate student access throughout the country, the main objective of HE policy has been to increase the number of universities. Consequently, 50 new public universities and 36 non-profit foundation universities were founded between 2006-11. The country currently counts 165 universities in all and there are public universities in every province.[1]

Public Universities in Turkey, by province



During the same time period, the student intake in public universities increased by 40% and the share of non-profit foundation universities increased by 21%: in all, an additional 286 000 students entered the HE sector.

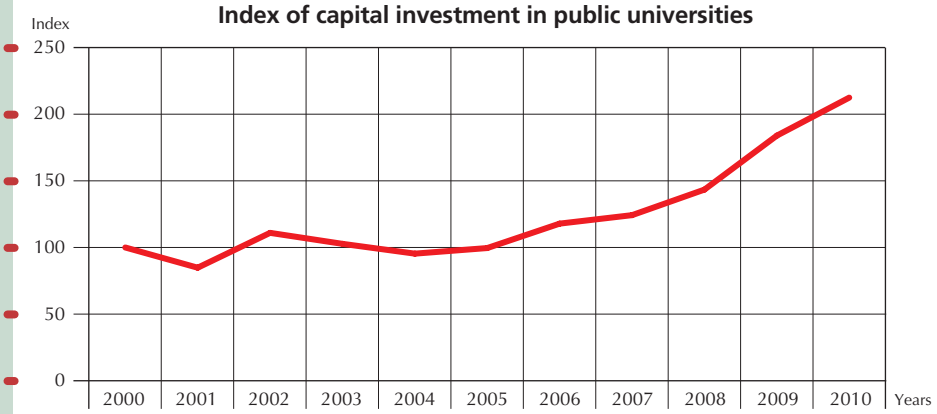
* This article is based on a study entitled "Space Planning for Higher Education" (*Yükseköğretimde Mekan Planlaması*).

1. State Planning Organisation (SPO) (2011), *Annual Programme*, p. 200.

CAPITAL INVESTMENT IN HIGHER EDUCATION

In order to accommodate the significant growth in student numbers, new buildings need to be constructed and new infrastructure created, necessitating extra funding for higher education institutions' capital expenditure. In Turkey, the biggest share of university capital revenue comes from public funding. Universities rarely benefit from donations from local stakeholders; these contributions, therefore, play a minor role in overall budgets. The growth in the number of universities is reflected in ever-greater competition to obtain more funding from public sources to meet the space needs of current and projected student numbers. The figure below illustrates the growth of total investments in the HE sector for 2000-10. These investments only cover educational buildings, infrastructure and equipment; hospital or R&D expenditures are not included.

Index of capital investment in public universities



Note: The base year is 2000 and the capital investment index was 612 509 000 TRY.
Source: The underlying data are drawn from the public investment programmes of the State Planning Organisation.

The figure above shows the marked increase in the overall investment budget for the HE sector, especially after 2005. Over the last decade, however, the number of public universities has doubled. Therefore, the increase in total investment in HE does not always signify an increase in individual university budgets. In fact, universities usually experience only marginal changes in their capital funding from one year to the other.

University expenditure on physical infrastructure is the second biggest budget item after that of staffing/human resources. Given that the availability of capital funds is lagging behind actual needs, managing the growth in student numbers is proving to be problematic. Furthermore, as 50 new public universities were founded between 2006-11, even larger cohorts can be expected over the coming years. This will, in turn, generate more pressure to provide new teaching and learning facilities.

CURRENT CHALLENGES FOR SPACE PLANNING POLICY

In Turkey, the State Planning Organisation (SPO) – the government agency responsible for the allocation of public funds to public institutions – determines universities' investment budgets. During the allocation process, the SPO organises negotiations with university managers, who are invited to explain the grounds for their investment requests. The SPO allocates their investment budgets within the parameters of budgetary constraints and in function of universities' needs.

Under the current implementation process, both policy experts and university managers alike attest to the many deficiencies that undermine space planning and budget allocation. Currently, investment planning in the HE sector is based on a needs assessment instead of standards for university buildings. Such a method of implementation creates subjectivity and encourages universities to request more than they actually need.

Universities do not collect data or relevant information about their own physical infrastructure. Furthermore, although they have strategic plans and new universities prepare development plans to shape the future of their facilities, these plans are not accompanied by long-term strategies which would enable them to manage their existing building stock and plan for the future. Lastly, when the need for a building arises, university managers simply ask the SPO to finance their project; there are no costs involved for the university, or benchmarks to be met. There are therefore big disparities between universities in terms of the indoor space area that they own.[2] Some rural universities have more space than they need, while others are in a critical situation.

THE NEED FOR A MACRO SPACE PLANNING STRATEGY

The SPO applies the following principles when allocating investment budgets:

- Building projects are prioritised according to demand, urgency and state of completion, so as to avoid bolstering project stock in the investment programme.
- Universities are grouped according to their age and state, which in turn largely determine their investment needs. Budget allocations are made according to the specific needs of each group.
- A modular approach to needs assessment and project design is recommended.
- The design stage for new project proposals should be rigorous and detailed.
- Architectural projects are supported by public funds so as to ensure that universities commission innovative and functional building projects.

Public policy is based on the conviction that there is need for more public capital funding and for rationalising all aspects of the decision-making process for new space. In this respect, it is paramount to gather relevant and reliable data from universities. Second, in order to promote fair competition between universities in terms of obtaining public capital funding, there is an urgent need to build up an inventory of existing universities' space. Information on post-occupancy use of existing buildings is, of course, critical for the decision-making process. To resume, Turkish higher education urgently needs a space planning strategy.

The research literature on Turkish universities' physical spaces is very limited. Some studies have been made by universities themselves, but they are often just a simple wish list and give little reliable data. In addition, some studies were made before HE became a generalised mass system, and these do not contain any recent or pertinent information. Hence, a questionnaire-based survey, described below, was conducted in 2005 and designed to furnish a comprehensive review of the existing system. It gathered information at university level and consulted university managers on the space planning process.

2. The indoor space area belonging to each university was reported by the Higher Education Council up until 2005. This comment is based on reports published prior to 2005.

HIGHLIGHTS FROM THE QUESTIONNAIRE'S FINDINGS

The questionnaire was sent to all public universities in the country at that time and 51 out of the 53 facilities responded. It consisted of 43 questions, of which 16 were open-ended. The comments to the latter questions were carefully examined when it came to interpreting the findings to ensure that no valuable comments were overlooked. All of the findings were tested for validity and reliability using statistical methods. The findings are summarised below:

- 38 universities had drawn up a physical space plan when planning future facilities; this type of plan was the most commonly used by universities.
- 70% of universities anticipated an increase in student numbers both in the short term (5 years) and long term (10 years and beyond).
- All universities declared that the indoor space area they owned was insufficient and they claimed to need more buildings and facilities due to increasing enrolments.
- The most popular fields of specialisation were medicine, engineering, architecture and agriculture. 75% of universities indicated that when planning their facilities, the university's field of specialisation was taken into account.
- 73% of campuses were earthquake-proof, while 24% had low earthquake resistance.
- Over 50% of universities reported problems relating to infrastructure on their campuses.

- Each university had, on average, 9 different campus locations. Facilities in metropolitan areas like Istanbul, Ankara and Izmir were more compact with, on average, 6 campus locations.
- Public transport facilities and distance to the city centre were the two main criteria reported for selecting campus locations.
- Universities frequently occupied buildings that they did not own: 69% of universities were housed in buildings owned by other public institutions.
- With the exception of a few universities in the eastern part of Turkey, no university reported seasonal problems affecting the duration of construction projects.
- New building needs were essentially determined according to the purpose of occupation and the number of students.
- 70% of universities did not use prototypes when designing buildings; instead, they preferred architectural projects designed by their own architects or they tendered for contracts. 20% of universities accepted architectural projects proposed by building contractors.
- University buildings were, on average, 16.4 years old.
- Minor modifications such as refurnishing or installing dividing walls and corridors were carried out on average every 10-12 years; macro changes such as altering the structure of the building were carried out on average every 28-40 years.
- University buildings that were constructed outside of public tender rules were finished three times faster than ones that fell within their scope.
- 70% of university managers believed that they should have the ultimate authority to decide on space planning.
- It was commonly agreed that the Higher Education Council should be responsible for co-ordinating and setting criteria in the decision-making process regarding new space.

- Only in the case of 6 universities were the building schedules centrally planned; as for the remainder, departments worked out their own scheduling.
- It was common practice for libraries, dining halls and auditoriums to be put to collective use, but this was less frequent in the case of class rooms, lecture rooms and laboratories.
- 88% of universities claimed that they used the buildings efficiently, but none of the universities was able to provide any kind of data regarding their utilisation.
- Universities' facilities offices mostly employed construction engineers and architects. Although there was a need for them, few landscape architects or environmental engineers were employed.

Since the questionnaire was conducted in 2005, some changes concerning universities' space planning process have been adopted. For instance, the law governing public tender rules has changed and now public construction projects should be completed within three years. Also, the new law does not allow universities to employ building contractors for their architectural projects. Moreover, new university campuses are being selected more rationally than before. Currently, campus locations are determined by a committee composed of competent senior-level authorities. When they examine a potential location, the committee takes into account the distance between it and the city centre, its infrastructure needs, ensures that it will be built on public land and checks the plot's surface area (it should be over 1 million m^2).

CONCLUSIONS

These findings give a general idea of the current state of higher education infrastructure in Turkey, whereas the consolidated responses to the questionnaire offer a mine of information regarding the design, construction, management, occupancy and post-occupancy stages of building projects. Hopefully, these efforts will stimulate further research on physical spaces in universities.

The main conclusion that emerges from an analysis of the questionnaire is that the severe pressure on the HE sector to expand has prevented it from producing relevant data and information on facilities. Universities need to be encouraged to rapidly put in place information and data systems to aliment a space planning process. Fortunately, policy experts have started to show interest in developing such a strategy for universities and this preoccupation is being echoed in high-level national policy reports. For instance, the SPO's 2011 *Annual Programme* states that "Since the last expansion of the higher education system, meeting the space needs of new public universities has become a priority. Currently there is a real need to build extra space for higher education institutions, but the effective use of existing buildings is of equal importance."[3]

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3. State Planning Organisation (SPO) (2011), *Annual Programme*, p. 205.

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