5.1 Introduction to Ranking

Despite of the political instability in South Korea, there are strong and solid relations between universities and industry. These relations continue to lead economic growth and technical innovation in this country. This is the conclusion reached by Reuters in the third annual classification of Asian and Pacific universities, working on achieving progress in sciences and creating new technologies [29]. Korea Advanced Institute of Science and Technology, currently known as KAIST, is ranked the first for the third year in a row. Historically speaking, KAIST is the oldest Korean university dedicated for research, sciences, and engineering. It has three branch campuses in the following cities: Daejeon, Seoul, and Busan. The university produces a large number of innovations and applies for more patents than the other 75 universities on the list. In addition, researchers all over the world cite highly the research and patents of this university.

The second ranked on the Asia-Pacific’s Most Innovative Universities list was occupied by the ancient Japanese University of Tokyo, which moved from the third (in 2017) to the second position (in 2018). Pohang University of Science & Technology (POSTECH) came in the third position, achieving a progress from the fourth position in 2017. It is worth mentioning that POSTECH was established by POSCO, a South Korean steel-making company, in 1986. POSTECH is the top university in terms of the number of scientific papers, submitted by industrial researchers, and the number of citations taken from POSTECH papers and found in scientific papers submitted by the private sector.

As for the fourth position, it was occupied by Seoul National University (SNU), which was established in 1946 as the first national university. It received a support worth USD 68 million (KRW76 billion) accounting for 15% of the total funds from external industries. It is known that universities in South Korea have close relations with industry. Classified the second in 2017, this university is two positions back in the list. Meanwhile, Chinese Tsinghua University moved from the sixth (in 2017) to the fifth (in 2018).

In addition, three non-ranked Chinese universities have joined the 2018 list of Asia-Pacific that includes 75 universities increasing the number of innovative Chinese universities to 27, three of which are located in Hong Kong. Meanwhile, the number of South Korean listed universities dropped from 22 (in 2017) to 20 (in 2018). However, the number remains more than expected from a country with a population of less than 51 million people, compared to China whose population is more than 1370 million people. On the other hand, Japan maintained its 19 universities in the ranking list for the second year in a row.

Although India’s population has grown more than 1280 million people, only one Indian university, the Indian Institutes of Technology (IIT), joined the list. The institute is a network of 23 universities with a central management of patents, which makes it difficult to know to which university a research paper belongs.

Countries with no ranking in the list include: Indonesia, Pakistan, and Bangladesh, the third, fourth, and fifth Asian countries in terms of population, respectively. In addition, there are no universities from either the Arabian Gulf, the Philippines, or Vietnam in the list, despite of their huge economies [29].

5.2 Table of Asia-Pacific’s Most Innovative Universities

Table 5.1 shows the Asia-Pacific’s Most Innovative Universities in 2018 [29]. This is the most recent rankings when this book was composed. It lists the 75 Most Innovative Universities in this region.

From Table 5.1, it is clear that the highest number of the Asia-Pacific’s Most Innovative Universities in 2018 is in China. In Table 5.2, the numbers of Asia-Pacific’s Most Innovative Universities in 2017 and 2018 in the different countries are given for comparison.
Table 5.1. Asia-Pacific’s most innovative universities in 2018

| Rank | Institution                                                      | Country         |
|------|------------------------------------------------------------------|-----------------|
| 1    | Korea Advanced Institute of Science and Technology (KAIST)       | South Korea     |
| 2    | University of Tokyo                                              | Japan           |
| 3    | Pohang University of Science and Technology (POSTECH)            | South Korea     |
| 4    | Seoul National University                                         | South Korea     |
| 5    | Tsinghua University                                              | China           |
| 6    | Osaka University                                                 | Japan           |
| 7    | Kyoto University                                                 | Japan           |
| 8    | Sungkyunkwan University                                          | South Korea     |
| 9    | Tohoku University                                                | Japan           |
| 10   | National University of Singapore                                  | Singapore       |
| 11   | Hanyang University                                               | South Korea     |
| 12   | Peking University                                                | China           |
| 13   | Yonsei University                                                | South Korea     |
| 14   | Kyushu University                                                | Japan           |
| 15   | Korea University                                                 | South Korea     |
| 16   | Tokyo Institute of Technology                                    | Japan           |
| 17   | Fudan University                                                 | China           |
| 18   | Keio University                                                  | Japan           |
| 19   | Shanghai Jiao Tong University                                    | China           |
| 20   | Gwangju Institute of Science and Technology                      | South Korea     |
| 21   | Zhejiang University                                              | China           |
| 22   | Chinese University of Hong Kong                                  | Hong Kong       |
| 23   | Hokkaido University                                              | Japan           |
| 24   | Kyung Hee University                                             | South Korea     |
| 25   | Monash University                                                | Australia       |
| 26   | Nanyang Technological University                                  | Singapore       |
| 27   | Ajou University                                                  | South Korea     |
| 28   | Huazhong University of Science and Technology                    | China           |
| 29   | Hiroshima University                                             | Japan           |
| 30   | Kumamoto University                                              | Japan           |
| 31   | Nagoya University                                                | Japan           |
| 32   | Beijing University of Chemical Technology                        | China           |
| 33   | East China University of Science and Technology                  | China           |
| 34   | Tokyo Medical & Dental University (TMDU)                         | Japan           |
| 35   | Tianjin University                                               | China           |
| 36   | University of Sydney                                             | Australia       |
| 37   | Ewha Womans University                                           | South Korea     |
| 38   | Hong Kong University of Science and Technology                   | Hong Kong       |
| 39   | University of Auckland                                           | New Zealand     |
| 40   | Shinshu University                                               | Japan           |
| 41   | South China University of Technology                             | China           |
| 42   | University of Queensland                                         | Australia       |
| 43   | Kanazawa University                                              | Japan           |
| 44   | China University of Petroleum                                    | China           |
| 45   | University of Melbourne                                          | Australia       |
| 46   | Southeast University China                                       | China           |

(continued)
### Table 5.1. (continued)

| Rank | Institution                                      | Country          |
|------|--------------------------------------------------|------------------|
| 47   | University of Hong Kong                          | Hong Kong        |
| 48   | University of Tsukuba                            | Japan            |
| 49   | Catholic University of Korea                     | South Korea      |
| 50   | Nanjing University                               | China            |
| 51   | University of New South Wales Sydney             | Australia        |
| 52   | Chiba University                                 | Japan            |
| 53   | Xi’an Jiaotong University                        | China            |
| 54   | Chonbuk National University                      | South Korea      |
| 55   | Chonnam National University                      | South Korea      |
| 56   | China University of Mining And Technology        | China            |
| 57   | Pusan National University                        | South Korea      |
| 58   | Dalian University of Technology                  | China            |
| 59   | Kayama University                                | Japan            |
| 60   | Kyungpook National University                    | South Korea      |
| 61   | Harbin Institute of Technology                    | China            |
| 62   | Nankai University                                | China            |
| 63   | Chung-Ang University                             | South Korea      |
| 64   | Inha University                                  | South Korea      |
| 65   | Sun Yat-sen University                           | China            |
| 66   | Sichuan University                               | China            |
| 67   | Shandong University                              | China            |
| 68   | University of Electronic Science and Technology of China | China        |
| 69   | University of Ulsan                              | South Korea      |
| 70   | Waseda University                                | Japan            |
| 71   | Indian Institutes of Technology System (IIT)     | India            |
| 72   | Kobe University                                  | Japan            |
| 73   | Konkuk University                                | South Korea      |
| 74   | Xiamen University                                | China            |
| 75   | Tongji University                                | China            |

### Table 5.2. Numbers of the Asia-Pacific’s most innovative universities in the different countries

| Countries                          | Numbers of the world’s most innovative universities |
|------------------------------------|-----------------------------------------------------|
|                                    | 2017 | 2018 |
| China (Including Hong Kong)        | 24   | 27   |
| South Korea                        | 23   | 20   |
| Japan                              | 19   | 19   |
| Australia                          | 5    | 5    |
| Singapore                          | 2    | 2    |
| New Zealand                        | 1    | 1    |
| India                              | 1    | 1    |
| **Total**                          | **75** | **75** |
