

**Hassan Abbas, *Pakistan Nuclear Bomb: A story of Defiance, Deterrence, and Deviance* (New Delhi: Penguin Random House, 2018)**

Pakistan's nuclear program has received a lot of negative attention due to nuclear proliferation activities after the discovery of A.Q. Khan Network. *Pakistan's Nuclear Bomb* is a book focusing on the proliferation activities of Abdul Qadeer Khan Network. Written by Hassan Abbas, a professor and chair of the Department of Regional and Analytical Studies at the National Defence University, Washington, DC this book is one of the several books and articles published in the West in the last few years on this topic.

The title of the book is misleading. The title focuses on Pakistan's nuclear weapons program, but the book discusses AQ Khan's alleged proliferation links with Iran, North Korea, and Libya. In fact, AQ Khan was only supervising the Khan Research Laboratories while the Pakistan Atomic Energy Commission was overseeing all other nuclear activities. So far, Pakistan was following two parallel programs on its journey to nuclearization. The author addresses two main questions. Firstly; whether Khan alone was responsible for proliferation activities or he was carrying out these activities with the backing of the Pakistani state. Secondly, the book looks at the circumstances that led to the proliferation activities of the A.Q. Khan Network.

**Making of a Security State**

Pakistan is viewed as a security state by many analysts, Mr. Hassan Abbas also contributes to the same perception. The author, however, has made an effort to explain the factors that had contributed, according to him, to the evolution of Pakistan as a security state. The formative years' challenges of Pakistan greatly

influenced its strategic culture. At the partition of British India, several challenges were inherited by the newly formed state of Pakistan. These challenges included setting up of administrative and institutional infrastructure, where none existed, suitable to run a modern state system. This new country's borders were partially unmarked. The military equipment that had to be transferred from India was not only not handed over to the new state but what was given to Pakistan by India as its share was mostly unserviceable and not fit for use. The transfer of funds too, was delayed for inexplicable reasons. To top it all off, millions of Muslims migrated to the newly created Pakistan. The fledgling State of Pakistan neither had the monetary resources nor the administrative support system in place to cope with these multiple problems of epic dimensions. The approach of Indian leadership further aggravated the problem as many politicians there, including ministers in-charge of important ministries, predicted that the new State of Pakistan being un-viable would soon rejoin India. All the problems faced by Pakistan and attitude of its bigger neighbor, India, contributed to the evolution of a strategic culture in Pakistan in which the main focus was on the defence of the country's geographical integrity. The 1971 intervention by India and dismemberment of Pakistan further strengthen this view. The unresolved Kashmir dispute also underpinned the strategic culture of Pakistan.

### **Pakistan's Nuclear Weapons Journey**

Pakistan had developed basic nuclear infrastructure for civilian purposes under the 'Atoms for Peace Program.' Pakistan Committee of Scientists was constituted within Pakistan Council for Scientific and Industrial Research (PCSIR) to explore options for Pakistan under the 'Atoms for Peace Program.' This effort led to the establishment of Pakistan Atomic Energy Commission (PAEC) in early 1956. Pakistan established Pakistan Institute of

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Nuclear Science and Technology (PINSTECH) near Islamabad as an R&D center. At PINSTECH, the Pakistan Atomic Research Reactor I, a swimming pool-type research reactor was provided by the USA in 1965. A second research reactor PARR II was also constructed by PAEC.

Canada provided Pakistan's first heavy-water nuclear power reactor of 137 MW capacity, which went operational in 1972 under the IAEA safeguards.

The shift had started in Pakistan's nuclear policy after wars with India in 1965 and 1971 and the Indian response to the Chinese nuclear tests in 1964. After the 1971 break-up of Pakistan and emergence of Zulfikar Ali Bhutto as the country's leader, full-swing work had started on the nuclear path, though secretly. The author argues that "although various factors influenced Pakistan's pursuit of its nuclear development program in its initial phase (the 1950s and 1960s), it was national security concerns that played the most instrumental role in turning it to a weapons-focused project in the early 1970s."

Pakistan initially pursued highly enriched uranium (HEU) route to develop a nuclear device as part of the nuclear fuel cycle. Engineering Research Laboratories were developed for gas centrifuge project under the administrative control of AQ Khan. The inter-agency rivalry between the PAEC, which was responsible for all fuel cycle activities, and the Khan Research Laboratories, responsible for centrifuge program only, helped in achieving several milestones and overcome difficulties in the nuclear fuel cycle, weapons design, and delivery system program. International pressure was constantly at play but, according to A.Q. Khan, Pakistan was ahead of international export control restrictions. The author maintains that contrary to the general perceptions, Pakistan's nuclear program was the result of tremendous teamwork.

## **Proliferation Activities**

Addressing the questions related to the proliferation activities and motivations behind AQ Khan's activities, Hassan Abbas starts with the proliferation links between Khan Network and Iran. Dividing the nuclear cooperation into four phases from 1987 to post 2004, he says that after the chemical weapons use against Iranian soldiers by Iraq during their 1980-1988 War, Iranian interest reinvigorated in the nuclear weapons, which had been lost after the 1979 Islamic Revolution. With limited options available, Iran sought Pakistan's help and received a half-hearted response from Pakistan to its initial overtures. Iran turned to the European suppliers, mainly Gotthard Lerch, of A. Q. Khan network to receive nuclear expertise. During the second and third phases, starting from 1988, Pakistan experienced political turmoil as both Benazir's and Nawaz' governments were dismissed. Army Chief Mirza Aslam Beg was in favor to share nuclear expertise with Iran but faced opposition from the President and government at that time. Later, Iranians began dealing directly with Khan as he was working largely independent of the Pakistani state.

On the proliferation links between Pakistan and North Korea, Hassan Abbas says that there is not enough information available on the deals between the two countries. Pakistan had purchased No-Dong liquid fuel missiles from Korea apparently in return for cash and later A.Q. Khan had struck a separate deal with North Korea for nuclear centrifuge technology. Nevertheless, North Korea tested Plutonium based device in 2006, not a uranium-based weapon. The author implies that A.Q. Khan had state's backing in his first dealings with North Korea and later he acted independently. The author concludes in an interesting way by pointing towards the North Korean and Indian nuclear cooperation to be explored. There is some evidence to suggest that India also benefited from these clandestine activities. Joshua

Pollack has investigated the possibility of India being the fourth customer of this illicit network in his work on the subject.

The network's ties with Libyan pursuit of the bomb is an open and shut case. Much of the details of the proliferation activities are available after the Libyan disclosure to the IAEA in 2003. Money was an important motivation for Khan Network in this case as Pakistan had no compulsions for nuclear cooperation with Libya.

The author avers "in the absence of an established decision-making process and a clear chain of command, it was possible for a small team to hoodwink the government of Pakistan."

### **A.Q. Khan's personality and political environment of Pakistan**

He makes a valid point that nuclear proliferation could neither be the goal nor the purpose of Pakistan's nuclear program. Nuclear Proliferation happened mainly because of motivations, influences, and political views of key individuals, like A.Q. Khan, who directed Pakistan's centrifuge (KRL) program and subsequent proliferation activities.

The propensity to remain in the limelight, self-projection and egoistic nature were some of the major personality traits of A.Q. Khan. His worldview largely revolved around the Western hegemonic and discriminatory behavior and restriction of nuclear technology to third world countries, particularly Muslim countries. Hence the defiance of the West by helping these countries. But allegations of involvement with North Korea questions the claims of his religious and ideological motivations for proliferation. These religious and ideological motivations also came under suspicions when Khan reportedly provided Iran with outdated and used centrifuges.

As Khan had acted independently during his work at the Khan Research Laboratories, the establishment of the Strategic Plan

Division was seen by him as a curtailment of his activities at the behest of the United States. The turbulent Pak-US relations after the fall of the Soviet Union and aid cut-off in 1990 by the US also left Pakistan wondering about the US partnership, which had used Pakistan only to achieve its goals in Afghanistan. These apprehensions and fears against the US played an important role in influencing A.Q Khan. The author also points out that the limited civilian control over the nuclear policies and internal instability also helped the proliferation activities.

Although the book is a late addition to the discussion, the issue of proliferation requires attention. The issue of proliferation has been discussed in detail in past and necessary steps have already been taken by Pakistan. It has improved its credentials and taken important steps to strengthen the safety and security of its nuclear program. The author support this assertion by stating that the Strategic Plans Division (SPD) has emerged as a responsible and effective institution managing Pakistan's nuclear program. Along with the SPD, the Pakistan Nuclear Regulatory Authority (PNRA) supervises, controls and regulates matters related to nuclear safety. It has also established the Personal Reliability Program (PRP) and strengthen its exports controls. Nevertheless, the book offers another perspective on the activities of the illicit network.

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