

Pemikiran dan Kiprah Sarwono Prawirohardjo dalam Pengembangan Lembaga Ilmu Pengetahuan dan Teknologi di Indonesia Tahun 1945-1983 = Sarwono Prawirohardjo's Thoughts and Role in the Development of Science and Technology Institutions in Indonesia, 1945-1983

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Abstrak

Sarwono Prawirohardjo adalah pionir pembentukan lembaga IPTEK di Indonesia karena berperan besar dalam pembentukan dan pengembangan Balai Perguruan Tinggi RI, IDI (Ikatan Dokter Indonesia), MIPI (Majelis Ilmu Pengetahuan Indonesia), LIPI (Lembaga Ilmu pengetahuan Indonesia), dan PKBI (Perkumpulan Keluarga Berencana Indonesia). Sumber data penelitian berasal dari arsip di ANRI berupa arsip Sekretaris Negara 1945-1965, Kongres dan Seminar Ilmiah 1957-1983, dan Pidato Presiden Soekarno 1958-1967. Di PDII BRIN ditemukan majalah ilmiah seperti Berita MIPI, Berita LIPI, dan Berita IPTEK. Arsip-arsip berupa surat kabar diperoleh secara digital di laman <https://www.delpher.nl>, <https://eresources.nlb.gov.sg/newspapers>, dan <https://www.nationaalarchief.nl>. Di Perpustakaan nasional didapatkan surat kabar Kompas, Pikiran Rakyat, dan Republik dalam bentuk microfilm. Temuan penelitian ini menunjukkan bahwa proses pelebagaan IPTEK sebelum kemerdekaan berfungsi untuk mengelola sumber daya dan mempertahankan kekuasaan kolonial. Pemikiran Sarwono mengenai lembaga riset terbentuk dari kombinasi faktor keluarga, pendidikan, lingkungan kerja, dan pengalaman organisasi. Sarwono memiliki berbagai gagasan tentang ilmu pengetahuan, penelitian, kesejahteraan masyarakat, prioritas pembangunan, kualitas peneliti, dan pelebagaan IPTEK. Sarwono tidak selalu berhasil mewujudkan semua gagasannya dan mengubah struktur yang ada namun terus berusaha membentuk perubahan dalam batasan-batasan struktur dengan mengoptimalkan perannya di lembaga IPTEK. Sarwono berhadapan dengan persaingan membangun kekuasaan di bidang IPTEK dengan Belanda, repatriasinya ilmuwan asing, krisis politik dan ekonomi masa Demokrasi Liberal dan Terpimpin yang menyebabkan penelitian merosot kuantitas dan kualitasnya, kebebasan para ilmuwan dibatasi, dan di bawah kendali pemerintah. Pada masa Orde Baru, Sarwono menghadapi kondisi dominasi penguasaan teknologi negara maju, skala prioritas industrialisasi, persoalan dana, kualitas dan kuantitas ilmuwan Indonesia, perencanaan, serta faktor budaya masyarakat. Di tengah kondisi tersebut, Sarwono tetap berhasil membentuk dan mengembangkan berbagai lembaga IPTEK, infrastruktur penelitian, memberi bantuan dana riset, menerbitkan berkala ilmiah, mengkoordinasi penelitian antarlembaga, membudayakan pertemuan komunitas ilmiah, terwujudnya pusat penerangan ilmiah nasional dan mengadakan hubungan bidang IPTEK dengan luar negeri.

.....Sarwono Prawirohardjo was a pioneer in establishing science and technology institutions in Indonesia, significantly contributing to the creation and growth of the Indonesian Higher Education Center, the Indonesian Doctors Association (IDI), the Indonesian Council of Sciences (MIPI), the Indonesian Institute of Sciences (LIPI), and the Indonesian Family Planning Association (PKBI). His work has left an indelible mark on the development of science and technology in Indonesia. The primary sources for this research include archives from ANRI, such as records from the State Secretary (1945–1965), Congress and Scientific

Seminar proceedings (1957–1983), and President Soekarno's speeches (1958–1967). At PDII BRIN, relevant scientific publications like Berita MIPI, Berita LIPI, and Berita IPTEK were examined. Additional archival materials in the form of newspapers were accessed digitally at <https://www.delpher.nl>, <https://eresources.nlb.gov.sg/newspapers>, and <https://www.nationaalarchief.nl>. Newspapers such as Kompas, Pikiran Rakyat, and Republik were found on microfilm at the National Library. The findings reveal that the institutionalization of science and technology in the pre-independence era primarily served to manage resources and sustain colonial rule. Sarwono's ideas on research institutions emerged from a mix of influences, including family background, education, work environment, and organizational experience. He developed numerous ideas regarding science, research, public welfare, development priorities, researcher quality, and the institutionalization of science and technology. Although Sarwono did not always succeed in implementing all his ideas or changing existing structures, he persisted in promoting change within institutional constraints by optimizing his role in science and technology organizations. Sarwono faced numerous challenges, including competition from the Netherlands in the scientific arena, the exodus of foreign scientists, and the political and economic crises during the Liberal and Guided Democracy eras, which reduced the quantity and quality of research, limited scientists' freedom, and placed them under government control. In the New Order period, Sarwono encountered issues such as the technological dominance of developed countries, prioritization of industrialization, funding limitations, the quality and quantity of Indonesian scientists, and societal cultural factors, including a lack of public interest in science and technology and a preference for traditional practices. Despite these conditions, he succeeded in establishing and developing various science and technology institutions, building research infrastructure, providing research funding support, publishing scientific periodicals, coordinating inter-institutional research, fostering scientific community gatherings, creating a national scientific information center, and establishing international relations in science and technology.