The Technological State in Indonesia: The Co-constitution of High Technology and Authoritarian Politics. **By Sulfikar Amir. Abingdon, Oxon: Routledge Contemporary Southeast Asia Series, 2013. Hardcover: 190pp.**

According to the author, a "technological state" is one with "a political economy that is largely structured by a macro vision of socio-economic transformations which places a strong emphasis on state-led rapid technological development" (pp. 9–10). He posits three essential features of the technological state that differentiates it from the developmental state: first, a high degree of technological supremacy, not economic growth, is the measure of success; second, the state institution in charge of technological advancement is relatively protected from external factors such as market forces; third, accomplishment is proven by presenting sophisticated technological accomplishments to the public, and not necessarily by improving their welfare. This book examines the New Order's love affair with high-technology, and especially the career trajectory of German-educated engineer B.J. Habibie who went on to become the third President of Indonesia after the downfall of "the father of development", President Soeharto.

Soeharto — who's New Order regime ruled the country with an iron fist from 1965 to 1998 — had ambitions to put Indonesia on par with developed countries. Soeharto's successful attempt to lure Habibie home from an impressive career in the aeronautical industry in Germany exemplifies the intersection between high-tech advancement and the authoritarian state: "We have to bring about some reforms and changes in science and technology, but please Rudy [Habibie's nickname], don't bring about any social upheavals" (p. 45). On his return, Habibie immediately set about transforming Soeharto's dreams into reality, mainly through an ambitious project to design and construct aeroplanes at the state-run Indonesian Aerospace Industry (IPTN).

The author combines historical description and sociological analysis in an engaging way, and his analysis of the intersection between high-tech development and authoritarianism is reflected throughout the book. Chapter 1 illustrates the comprehensive backdrop against which authoritarian politics and technological development intersected. Chapter 2 depicts the close personal relationship between Soeharto and Habibie. Chapter 3 discusses the practices of strong technocracy, which constituted the New Order's

authoritarian governance. Chapter 4 examines Habibie's influential concept of "leapfrogging" and its insidious influence on the logic of the New Order's development, which led to the establishment of the technological state. Chapter 5 looks at how the transformation of IPTN from a small-scale concern into a world-class aircraft maker became the prime manifestation of the logic of the technological state. Chapter 6 describes "take-off", depicting an important stage in the accumulation of knowledge and technical capabilities of the technological state, taking the N250 aircraft as a case study. It describes in detail the maiden flight of the N250 in August 1995, an event that evoked a tremendous sense of pride among Indonesians, many of whom watched it live on television with a sense of admiration. Chapter 7 goes on to describe how the New Order's high-tech ambitions fell victim to the 1998 financial crisis, during which IPTN was forced to produce cooking pots to help finance the moribund N250.

The author highlights the political aspects of Indonesia as a technological state, though Habibie was often regarded as apolitical. The author describes two ways in which Habibie influenced the political dynamics of the New Order. First, he acted as a bridge between Soeharto and Muslim modernists through his role in the establishment of the Indonesian Muslim Intellectual Association (pp. 51–56). Second, Habibie invited the self-declared opposition group Petisi 50 — which consisted of disgruntled former prominent officials and generals — to visit IPTN. The leader of the group, Ali Sadikin, "was even brought to tears when he delivered a speech at IPTN in which he expressed his deep admiration and pride for what IPTN was able to achieve in high technology development" (pp. 112–13). The author concludes that "This suggests that the impressive psycho-political effect of high technology encouraged the Petition 50 to end their oppositional stance against the New Order as they came to acknowledge the importance and significance of the New Order's high technology accomplishments" (p. 113).

The author's application of the technological state to analyse the intersection between the authoritarian state and high-tech advancement using Indonesia as a case study makes a valuable contribution to the literature on the theoretical development of science, technology and society, but also to Southeast Asian studies more generally. Nevertheless, in describing the downfall of the technological state in Indonesia, the author seems to base most of his analysis on the long-standing disagreements over development between economists and engineers within the New Order technocracy. But at the same

time he acknowledges the intervention of global market forces in the form of the terms and conditions attached to the IMF bailout package. The IMF demanded that IPTN be dismantled in exchange for the much needed loan. Yet the author insists that local politics was the primary cause of the mega project's failure.

Disappointingly, the author makes no attempt to predict how or whether the technological state could re-emerge in Indonesia, even though during the writing of his book the country's economy steadily improved. Certainly after a deep analysis of the country's experiment with high technology, a "remains to be seen" (p. 166) phrase is inadequate to provide curious readers with a glimpse of the country's potential to again try to realize its high-tech ambitions.

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