

The Ethical Considerations of the U.S. Implementation of Techno-Nationalistic Policies Towards  
China

May 2024

Advanced Placement Seminar

Wordcount: 1288

The world is on the brink of economic change with the advent of the Fourth Industrial Revolution, also known as the Digital Revolution, which is the convergence of various new technologies, including advancements in robotics, biotechnology, 3D printing, advanced manufacturing, nano-engineering, and artificial intelligence. However, will this ever come to be with the increasingly common occurrences of techno-nationalism? Techno-nationalism serves as a hindrance to the digital revolution, with it being where the government applies protectionism, the restriction of international trade, to the development of technology (Manning). Although the U.S. was once the global leader of the semiconductor industry, its share of global semiconductor manufacturing capacity has dropped from 37% to 12% between 1990 and 2021. Ergo, the U.S. passed the “CHIPS for America Act,” which allocated 50 billion USD for semiconductor research, development, and manufacturing. The act works in collaboration with the Trump Administration ban list for semiconductor trade, adding 108 Chinese corporations to the Bureau of Industry and Security restricted entity list, demonstrating techno-nationalistic notions (Capri). It is clear that significant issues have arose with the implementation of techno-nationalistic policies in the United States restricting China from participating in the semiconductor trade. Due to the significant global impacts of U.S. techno-nationalistic policies, it is imperative to debate the ethicality of implementing such policies on China by analyzing Chinese motivations and impacts, effects on global markets, and opinions of unaffiliated foreign countries on the matter.

Firstly, to give a basis for the ethicality of techno-nationalistic policies, it is necessary to debate Chinese motivations toward semiconductor development and how this has affected U.S. motivations for restricting China’s development in semiconductor manufacturing. The academic journal, *China Economic Review*, has found that U.S. tech export controls have caused Chinese semiconductor imports to decline by 14.6% in the first 9 months of 2023 (China Chip Imports

Decline). China ultimately wishes to pursue greater autonomy over its semiconductors so that it may advance its technology. Other countries are opposed to this as they presume that if China achieves a dominant position in the semiconductor industry, it will use it for intelligence, military, commercial, and political advantages, fearing the Chinese abuse of power. This is surmised from the fact that China is notorious for stealing intellectual property from companies and nations around the world to advance its industries and technology. The implementation of these policies has impacted China's overall economy, seeing a 7.5% decrease in the same nine-month period (Tadjdeh 7).

The restrictive nature of techno-nationalistic policies is widely considered, but what is not is the extent to which techno-nationalistic policies have impacted Chinese workers in the semiconductor manufacturing industry. Myoung-Hee Kim, a senior faculty lecturer at McGill University, published in the *International Journal of Occupational and Environment Health* epidemiological studies that have shown harmful health effects resulting from working in semiconductor production, including spontaneous abortion, congenital malformation, and reduced fertility. The significance of this is tied to China's need for semiconductors. By banning trade with China, it would need to produce semiconductors independently to keep in line with its goals of development. Thus, more workers would need to work in the semiconductor manufacturing sector, leading to more health afflictions. Through these repercussions, it is clear that the effects of establishing techno-nationalistic policies against China will inadvertently result in the detriment of Chinese workers.

Another consideration of techno-nationalistic policies is its impact on global markets. Hugo van Manen, a strategic analyst at The Hague Centre for Strategic Studies argues for the necessity of techno-nationalism by drawing parallels with European countries, primarily the

Netherlands. It was found that their indirect approach to the global market has left them especially susceptible to espionage, maintaining that techno-nationalism is necessary by illustrating the economic failures of countries that did not employ these policies in the past. Opposing this view, Yadong Luo, a researcher who has published over 200 articles on international business, and Ari Van Assche, a professor of international business, argue that the establishment of techno-nationalistic policies would be a shift from market liberalism, meaning the relinquishing of free-trade rules which are the basis for international trade, heightened governmental control accentuating “market-distorting” industrial policies, and the weaponizing of global value chains for geopolitical purposes (1423). Reduced market liberalism is especially significant, as it is a point which the United States prides itself on. Yadong also illustrates the impact of these policies on multinational enterprises (MNEs) in his solo paper concerning the matter, published in the *Journal of International Business Studies*. He finds that techno-nationalism presents risks toward multinational enterprises by obstructing MNEs dependent on the global technology supply chain (552). The aforementioned debates whether it is ethical to control businesses by blacklisting corporate entities, the medium through which the semiconductor and computer chip trade occurs, highlighting the reluctance some MNEs may face in response to new American techno-nationalistic policies. This is intensified considering the principle corporate goal is profit, which is in direct opposition to the U.S.’ policies. The reputed Union of International Associations coincides with this opinion in *The Encyclopedia of World Problems*, which defines techno-nationalism to be analogous to the excessive governmental control of information, which can extend to a wide variety of topics, including the hiding of existing injustices, inequality, exploitation, and repression. This on a global scale can

encourage espionage and subversive activities, leading to a lack of cooperation and international scrutiny.

Despite the U.S.' clear animosity towards China, the actions of foreign nations toward it are telling of their opinion on the matter. A specific country that demonstrates a hesitancy to ban semiconductor trade with China is South Korea. Yul Sohn, a professor of International and Japanese political economy with a Ph.D. in political science finds in the journal, *The Pacific Review*, that South Korea is under pressure due to the positive relationship it shares with the U.S. and China despite their conflicts with each other. Sino-American competition has influenced the South Korean trade policy to become "increasingly reactive and defensive" as its "prosperity is firmly entrenched in an open international trade regime" (1036). Ensuing this, Lee Jeong-ho, a Chinese journalist with a bachelor's degree in Chinese studies as well as Sohee Kim, a researcher in the Council on Foreign Relations, illustrate the modern implications of the positive Sino-Korean relationship, finding that South Korea has enacted its own version of the 'Chips Act' where it invested \$422 billion into areas such as chips and electric vehicles, including plans for hubs housing chipmaking plants. However, it has not enacted the same "guardrail" policies the U.S. has utilized, finding that the "new restrictions would not prohibit technology upgrades at its chipmakers' factories in China." Through the example of South Korea, one would find that various countries share beneficial relationships with China, and thus are hesitant to take the same stance as the U.S. and hinder Chinese development.

Overall, through the analysis of the adverse effects of U.S. techno-nationalistic policies on Chinese workers in the semiconductor industry, negative impacts on global markets, and refusal of foreign nations such as South Korea to follow the U.S. in techno-nationalism, all considerations of the matter find that the implemented policies are unethical. Thus, to resolve the

issue, various solutions could be applied in unison. The first step would be to petition for the repeal of the “CHIPS for America Act” as well as a formal request for the removal of Chinese Corporations from the Bureau of Industry and Security restricted entity list. There should also be an implementation of firmer restrictive policies on the government concerning economic matters. Following this, it would be apt to form an international assembly to conduct debates on the even distribution of intellectual property among countries as to promote uniform global development and prevent further techno-nationalistic developments with regards to worldwide technological advancements.

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