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Nudging Technology Companies Toward Better ESG: A Commentary on Taiwan's Voluntary Approach

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This paper examines Taiwan's approach to pushing listed companies toward better goals for environmental, social, and governance (ESG) performance, focusing on Taiwan's vital high-tech industry. The paper then outlines arguments that the current "nudging" approach of Taiwan's capital market regulators appears to be a compromise between ESG activists' goals and profitability in a strategically important economic sector. More research must be done to understand how to invoke market power to improve not only environmental (E) conditions, but also social (S) and governance (G) factors in an industry representing a significant part of the global supply of electronic products.

Technology Firms and Their Environmental Impact in Taiwan

The high-tech sector plays an important role in Taiwan's economy, yet it is also environmentally damaging. The sector powers the global supply chain for electronic devices and is crucial to the manufacturing of products that require computer chips, such as motor vehicles. However, high-tech firms also consume more energy (and thereby have a large carbon footprint) and natural resources (such as clean water) than many other manufacturing industries. The Taiwan Semiconductor Manufacturing Company Ltd. (TSMC), the world's largest chip foundry, is alone projected to consume 7.2% of the electricity generated in Taiwan in 2022.[1] In addition, high-tech firms are notorious for their water usage. TSMC alone used 57,000 cubic meters of water per day at the Hsinchu Science Park in 2019, and a new 2-nanometer wafer plant is projected to use an additional 120,000 cubic meters of water per day.[2] Although it does not appear to be as "dirty" as petrochemical plants, high-tech manufacturing still generates significant quantities of pollutants, including wastewater containing poisonous metals.

Hence, a fine balance must be reached between facilitating the economic contributions of high-tech firms and addressing their environmental threats. Industry and capital market regulators face a dilemma: should they turn a blind eye to harms from a strategically important industry for the sake of economic growth and wealth accumulation, or meaningfully tackle the environmental risks posed by high-tech firms?

Thus far, Taiwan's Financial Supervisory Commission (FSC), the financial regulator, and the Taiwan Stock Exchange (TWSE) have adopted a voluntary approach to improving ESG-related disclosures, incentivizing firms to adopt better practices while maintaining some degree of market power. The regulators employ two main approaches: the ESG Index and voluntary disclosures about climate change and carbon emissions. This paper examines each in turn.

Using the Stock Market Index

One approach being used is to usher firms toward better ESG practices using market power. For this purpose, the TWSE published the "FTSE4Good TIP Taiwan ESG Index" (ESG Index) in collaboration with FTSE International Ltd. (FTSE) in 2017.[3] The index is based on valuation models adopted by the FTSE assessing over 300 items related to listed companies' ESG issues. The index serves as an incentive for listed companies to improve their ESG practices. It also helps investors (notably large institutional investors like fund management firms and insurance companies) to invest in firms with better ESG practices. In turn, the index might incentivize firms to move toward better ESG if institutional investors follow the index to make investment decisions, hence affecting future finance and stock prices. Inclusion in the index may also offer some symbolic value for companies in terms of better ESG. The theory is that by relying on market power — through pricing, trading activities, or reputation — companies can be nudged toward better ESG goals.

Statistics from the FTSE, published in a fact sheet, provide some clues as to how the index reflects Taiwan's market. Out of the 109 constituent stocks, as of October 29, 2021, 60.17% belonged to the technology sector, followed by the banking sector at about 10% and insurance companies at 5%.[4] Hence, it could appear at first glance that Taiwan's technology sector is leading the way in ESG efforts compared to other industries. Among the top 10 constituents of the ESG index, TSMC alone comprises 30.09% of the index, followed by two other large technology firms, MediaTek and Hong Hai Precision Industry.[5] The former is a large chipmaker, and the latter controls the largest contract manufacturer/assemblers of electronic products in the world. The remaining companies in the top 10 are largely financial firms. However, there is no sufficient data to prove that technology firms in Taiwan actually are performing better than others regarding ESG. We only know that there are far more technology firms included in the ESG Index than companies from other industries.

Thus, it is difficult to judge the impact of the ESG Index. It is also unclear whether technology firms are striving to achieve better ESG goals because they want to be included in the index. But there is evidence suggesting that some tech firms may be subject to pressure from global institutional investors to improve ESG practices.[6]

Using Voluntary Climate Change Reporting

The second approach that Taiwan's regulators use is to promote transparency and disclosure regarding ESG, notably with respect to companies' strategies and policies regarding carbon emissions and climate change. The TWSE has guidelines for listed companies to use when preparing annual corporate social responsibility (CSR) reports as well as non-mandatory guidelines for best CSR practices.[7] The reporting guidelines specifically require companies to consider environmental sustainability, water usage, and carbon emissions.[8] Hence, the FSC and TWSE have sought to nudge listed companies to improve their CSR practices, encouraging public information disclosures and offering less intrusive guidelines for best practices.

This paper has some observations regarding ESG-related disclosure in Taiwan. First, the number of companies that made voluntary disclosures was relatively small in each reporting period. Per Taiwan's financial regulators, there were 948 listed companies on the main board of the TWSE in 2020 and 942 in 2019.[9] However, only 93 had published ESG reports for the 2020 financial year by November 2021.[10] Between 2016 and 2019, about 140 companies made disclosures. This means that fewer than 15% of listed companies disclosed information about carbon emissions.

Second, the present research found that the information disclosed was largely general or vague and included promotional materials. The disclosures often lack a concrete promise or target for the company to follow or work toward. Moreover, such disclosures also often lack details regarding the current state of carbon emissions or the firm's plans for future reductions. For instance, TSMC's carbon emission disclosure for the financial year of 2019[11] began with a general recognition that the company might face some regulatory rules in the United States and China regarding the reduction of carbon emissions. The company then made a general statement that there could be substantial risk facing the company due to climate change (such as natural disasters and droughts) while recognizing opportunities offered by climate change (such as utilizing carbon trading and greener production processes). The main strategy laid out was to promote more manufacturing with lower carbon emissions and more renewable energy to strengthen resilience to climate change. TSMC claimed that it has had an auditing system for carbon emissions since 2005 and promised to reduce its carbon emissions by 40% by 2030 (compared to data from 2010), use more renewable energy, and improve energy efficiency. Otherwise, the statement reveals little in terms of how the company plans to reduce carbon emissions in the long term.

This paper does not claim to make a full empirical analysis of how companies disclose carbon emission information and what information is included in such disclosures. However, after analyzing a limited sample of disclosures made by technology companies in Taiwan, it appears that such disclosures are often mere formalities. Some companies declare the amount of their carbon emissions in a year, but other companies reveal only vague information in this regard. The highlights of such disclosures are often how much water or energy consumption was reduced in past years, presented as proof of the disclosing company's commitment to reducing carbon emissions. Apart from some general statements about how companies are preparing to "save the planet," they normally fail to make any concrete promises or provide effective guidance about what they plan to do.

Reflection

In summary, Taiwan's financial regulators have thus far mainly adopted a "nudging" approach to ESG with the publication of the ESG Index and the incentives for voluntary disclosure regarding carbon emissions. This approach suits the needs of Taiwan's high-tech sector, an industry producing significant economic growth but also consuming tremendous amounts of water and electricity. Taiwan's approaches seem to be a compromise between the high demand for profitability to satisfy numerous individual investors in Taiwan and the need to achieve ESG goals (at least on paper). However, a limited sample of climate change disclosures by Taiwan's top high-tech firms also reveals that such disclosures of carbon emissions may provide more form than substance. The relatively low percentage of companies making disclosures also shows that, thus far, many companies have not taken ESG seriously, indicating the ineffectiveness of a voluntary disclosure regime.

In addition, Taiwan's approach focuses narrowly on traditional corporate social responsibility and carbon emissions. Other aspects of ESG are not prominently displayed in Taiwan's current voluntary disclosure regime. With manufacturing facilities sprawling around the world, including in developed and developing countries, Taiwan's high-tech firms may not be able to escape challenges regarding various ESG issues posed by global investors.

In conclusion, this paper proposes that Taiwan's regulators should rethink their approach to ESG, especially for a strategically important industry like Taiwan's high-tech sector. Given the lack of substance of disclosures under the current regime, more may have to be done to force companies to reveal more information and achieve environmental, social, and governance goals on an island that is prone to water shortages and natural disasters.

Notes

[1] Alynne Tsai, *TSMC's Push Toward Green Energy*, Taipei Times (July 17, 2020),

https://www.taipeitimes.com/News/editorials/archives/2020/07/17/2003740051 (last visited Nov. 18, 2021).

[2] Hannah Chang, *Can Taiwan Quench TSMC's Thirst for Water?*, Commonwealth Magazine (Apr. 8, 2021), https://english.cw.com.tw/article/article.action?id=2956 (last visited Nov. 18, 2021).

[3] See Taiwan Stock Exchange media release (Nov. 30, 2017), https://cgc.twse.com.tw/pressReleases/promoteNewsArticleCh/2074 (last visited Nov. 18, 2021).

[4] FTSE, *Factsheet for FTSE4Good TIP Taiwan ESG Index* (Oct. 29, 2021), https://research.ftserussell.com/Analytics/FactSheets/temp/187b1772-b726-417c-959b-8ac0c65ee0fd.pdf (last visited Nov. 18, 2021).

[5] *Id*.

[6] *E.g*., Kai-yuan Teng, *How ESG Investors Jolted Foxconn into Taking Climate Action*, Commonwealth Magazine (Sep. 30, 2021), https://english.cw.com.tw/article/article.action?id=3089 (last visited Mar. 31, 2022).

[7] Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies, http://eng.selaw.com.tw/LawArticle.aspx?LawID=FL052368&ModifyDate=1090213 (last visited Nov. 18, 2021).

[8] *Id*., articles 16 and 16.

[9] See website of Securities and Futures Bureau of Financial Supervisory Commission, https://www.sfb.gov.tw/ch/home.jsp?id=1010&parentpath=0,4,109 (last visited Nov. 18, 2021).

[10] The number is counted from the website of Market Observation Post System in https://mops.twse.com.tw/mops/web/t152sb01 (last visited Nov. 18, 2021).

[11] The report is extracted from the Market Observation Post System.

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