

## Multi-stakeholder Approach Matters to Supply Chain Responsibility: Lessons Drawn from the ASE's Controversies

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**Abstract.** Environmental protection is part of the Corporate Social Responsibility (CSR) commitment that all companies are eager to secure. However, a growing level of scrutiny over the CSR practices of the electronics supply chains has followed the global trend of extensive outsourcing. Studies have shown that there is still a huge gap on the interpretation of legal compliance and numerous inconsistencies regarding to the auditing process for this CSR commitment. In this study, we investigated the CSR disputes involving the world's largest integrated circuit (IC) assembly and test services provider in Taiwan, Advanced Semiconductor Engineering (ASE) Inc. We analyzed the responses from ASE, the concerned citizens and civic groups, the local government and its policy schemes, and the brand-name companies surrounding the ASE environmental violations and controversies. This paper demonstrated that the fabless brands were unable to monitor or document the actual CSR practices of their suppliers without engaging the concerned local stakeholders. By leaving out the local citizen groups from the auditing processes, the firms made little progress to fundamentally change their practices and would easily resume business as usual. Our research showcased the importance of using a multi-stakeholder approach to fill the void left by insufficient regulations and incompetent agencies as well as to improve supply chain management. Furthermore, the information disclosure and stakeholder participation provisions should be emphasized and reinforced as a part of the supply chains' obligations.

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**Introduction.** Environmental protection is part of corporate social responsibility (CSR) commitment that all companies are eager to secure. This motif is explicitly instilled into the major brand-name electronic companies. In the past years, some brands have committed themselves to reduce the environmental impacts of their products by phasing out hazardous materials and requiring their suppliers to meet high environmental standards. Companies like Intel have managed to “establish wastewater goals for each element based on the site with the most stringent standards” (Intel, 2013: 60). Apple (2014) has also established standards to “ensure that all regulated process wastewater generated from a facility’s production process are properly managed to avoid adverse impacts on the environment.” Electronic Industry Citizenship Coalition (EICC) stipulated that “wastewater and solid waste generated from operations, industrial processes, and sanitation facilities are to be characterized, monitored, controlled, and treated as required prior to discharge or disposal” (2012: 6). International certifications and programs have also demonstrated similar spirit. For example, ISO 14001 demands companies to become capable of monitoring and correcting the non-conformances emerged from their business activities (Whitelaw, 2004: 95).

Although the fabless brands have made noble commitments on social environmental responsibility, it should be noted that the information and communications technology (ICT) hardware production sector has been structured through outsourcing and specialization in complex networks of “fabless” brands, large contract manufacturers, and a variety of small- and medium-sized component suppliers in low-cost regions (Evermann, 2014; Lüthje, 2006). This global trend of extensive outsourcing showcases the growing scrutiny of CSR issues in the electronic supply chain (GoodElectronics and CSR Platform, 2009; Lüthje et al, 2013). While some brands claimed to work with their suppliers to publish CSR reports (Intel and BSR, 2013; Intel, 2013) and require their contract manufacturers to meet all of the local laws and the brands’ guidelines, there is still a huge gap between the legal compliance and the inconsistent auditing process for this CSR commitment (Nova and Shapiro, 2014). Thus, it is important to focus on the local performance of contract manufactures to realize the real sustainable practice of the ICT industry.

*Environmental issues for the ICT Manufacturing Sector in Taiwan.* As the third major hub of contract manufacturing in Asia and the home of the most sophisticated semiconductor companies, Taiwan provides a good case to understand the environmental practices of the ICT hardware manufacturers. The information technology (IT) manufacturing firms are often agglomerated in the industrial parks in Taiwan. Several studies on Hsinchu Science Park (the so-called Eastern Silicon Valley) have identified that IT production and industrial expansion have had problematic impacts on the environment, workers, and community people (Chang et al, 2004; Lin et al, 2009; Taiwan EPA, 2007). Numerous case studies on environmental disputes related to high-tech wastewater discharge and science park expansion have also demonstrated that the environmental system has been unable to address the broad and adverse impacts associated with the high-tech park developments (Tu, 2005; Tu and Lee, 2008; 2010). However, the environmental problems associated with high-tech industrial parks were not well known to the public, and the IT industry was generally considered green and clean. (Tu, 2007; Smith et al, 2006). Moreover, the notorious environmental reputations have not halted these IT firms from gaining the international and domestic CSR recognitions due to their claims of legal compliance (Tu and Lee, 2009).

*ASE's Environmental Violations and Its “CSR” Recognitions.* Under this social context, this paper investigated the notorious controversies surrounding ASE’s illegal wastewater discharge issues in Taiwan. ASE is one of the strongest players in the field of integrated circuit (IC) assembly and test services. On October 1, 2013, one of ASE’s plants located in Kaohsiung City

of Taiwan named K7 was found to have discharged large amounts of untreated wastewater into the nearby Houjin River. The investigations conducted by the local environmental officials indicated that the wastewater contained nickel (4.38mg/L) and highly acidic toxic substances with a pH of 2.63, suspended solids level of 96mg/L, and chemical oxygen demand level of 135mg/L; all of which have far exceeded the standards provided by Water Pollution Control Act. It was also reported that some crews used tap water to dilute the wastewater before inspection by the Environmental Protection Bureau Kaohsiung City Government (EPBKCG). ASE refuted the accusation of vicious intention and claimed that the misconduct by K7 was a one-time event (Taipei Times, 2013/12/11). It also stated that the processed water with a pH level of 4.14 was in compliance with present regulations, whereas the samples tested by the Bureau were conducted at different times and thus showed different results (Taipei Times, 2013/12/14). The civic groups and local residents accused ASE of its irresponsible wastewater discharges that have affected 1,390 hectares of rice farmlands as well as fish farming and offshore fishing industries downstream of the Houjin River. As a result of this toxic discharge, ASE was fined NT\$600,000 (US\$19,000) and ordered to shut down K7 on December 20, 2013 by the EPBKCG (Taipei Times, 2013/12/21).

ASE's illegal wastewater dumping case shocked the society because ASE has long been considered a "green business" and had been rewarded with numerous CSR recognitions; including ISO 14001 certification, SONY Green Partner, SA8000 (Social Accountability 8000 International Standard) (see table 1 for the overview of the ASE's CSR certifications), and several domestic CSR Awards issued by the Taiwan government agencies and Taiwan Institute for Sustainable Energy (table 2). Ironically, it is through the K7 incident that the ASE's notorious environmental records surfaced to the public. According to both the Taiwan EPA and the EPBKCG, ASE has violated several environmental laws at least 29 times between 2011 and 2013. The non-compliance records were astonishing because approximately over 8 violations occurred each year. Even in 2014 when ASE K7 was ordered to stop operation by the EPBKCG, the other ASE plants were still violating a number of environmental regulations and received 23 violation notices by January 2015 (table 3).<sup>1</sup> Despite a series of violations, ASE was only fined NT\$3 million for the illegal water discharge.

**Table 1. CSR Certifications granted to ASE, 2010 to 2013 (Source: CET, 2014)**

Year	Certifications	Certification Body
2013	ISO 14001:2004 Environmental Management System	TUV NORD CERT
2012	SONY Green Partner SONY	SONY Procurement
2011	OHSAS 18001:2007 (Occupational Health & Safety Advisory Services)	TUV NORD CERT
	SA 8000:2008 (Social Accountability 8000 International standard)	TUV NORD CERT
	TOSHMS: 2007 (Taiwan Occupational Health and Safety Systems)	TUV NORD CERT
2010	QC 080000 Hazardous Substance Process Management	ECCB and SGS Taiwan

**Table 2. Domestic CSR Awards presented to ASE, 2010 to 2012 (Source: CET, 2014)**

Year	Awards	Awarded by
2012	Certificate of Cleaner Production Assessment	Industrial Development Bureau, Ministry of Economic Affairs
	Taiwan Corporate Sustainability Award	Taiwan Institute for Sustainable Energy
	Taiwan CSR Award--Bronze	Taiwan Institute for Sustainable Energy

<sup>1</sup> The data is organized using the Taiwan EPA "Pollutant Release and Transfer Register" web system.  
<http://prtr.epa.gov.tw/Penalty/Statistics>

	National Healthy Workplace Award-Health Promotion Pilot	Department of Health, the Executive Yuan
	Five Star Organization for Labor Security	Council of Labor Affairs, the Executive Yuan
2011	Model Company of Clean Production	Industrial Development Bureau, Ministry of Economic Affairs
	Taiwan Green Classics Awards	Ministry of Economic Affairs
	National Invention & Creation Awards--Contribution Award	Ministry of Economic Affairs
	The 12th place in the Top 50 Common Wealth Corporate Citizenship Award	CommonWealth Magazine
	Taiwan CSR Award--Honorable Mention	Taiwan Institute for Sustainable Energy
2010	Taiwan CSR Award--Honorable Mention	Taiwan Institute for Sustainable Energy

**Table 3. ASE environmental penalty records, 2011/3 to 2015/1**

Year	Plant	Number of Violations	Penalty (NTD)
2011	K1	1	140,000
	K5/TJ1, rename 2014/6/30	4	550,000
	K7/9, rename 2015/4/16	3	160,000
	Packing Plant	1	100,000
	Head Office	1	230,000
2012	K5/ TJ1	2	30,000
	K7/9	2	800,000
	K11	1	140,000
	Head Office	3	940,000
2013	K5/TJ1	1	140,000
	K7/9	8	109,999,562
	K11	1	60,000
	Head Office	1	140,000
2014	K1	2	22,000
	K3	1	6,000
	K5/TJ1	1	12,000
	K7/9	2	42,000
	K11	2	66,000
	KM4	1	10,000
	K12	3	44,000
	Head Office	9	812,000
	K(TJ)2B	2	32,000

**Research Questions.** The objective of this paper is to answer the following research questions: How did ASE, local government, and local civic groups respond to the incident? What are the gaps between the actual local practices and the institutional codes of CSR? What lessons can be drawn from the ASE disputes to improve supply chain responsibility and international governance for the global electronics industry?

**Investigative Method.** In this study, we investigated the environmental controversies surrounding ASE's illegal wastewater discharge incident, analyzed the current domestic policies'

inability to prevent the firm's irresponsible toxic discharges, and discussed the drawbacks of international CSR codes in terms of holding the IT manufacturers accountable. The researcher analyzed the official environmental record data that provide evidence of environmental violations and policy responses. The researcher also investigated documents from various sources including the firm's CSR reports and issued statements, brand name companies' reactions, government's official responses, citizen groups' press releases, as well as news clippings to gather the evidences and depict a full picture of the controversy. The researcher adopted the participant observation method to gain first hand data by participating in the communication and interaction processes in relation to ASE's illegal wastewater discharge disputes, which involve intensive correspondences with firms and citizen groups. This qualitative research analysis thus enabled us to understand the environmental policy gaps and CSR executions in depth.

**Results and Discussion.** In this section, the researcher first questioned whether the conducts of ASE in response to its wastewater disputes were meant to fulfill its supply chain responsibility. The local CSR demands were discussed to provide a comparison example against ASE's responses. The current policy scheme on wastewater management and the role of the government in environmental monitoring implementation were further explored to understand the incompetence of the local environmental system. The responses from the brands were analyzed to showcase their blind spots over supply chain management. The discussions then highlighted the importance of a multi-stakeholder approach required to improve the implementation of supply chain responsibility.

**CSR or Greenwash?** Since the ASE's environmental violation records have been revealed and K7 was ordered to suspend operations, ASE started numerous campaigns to restore its public image. On December 16, 2013, ASE issued an advertising statement on the Wall Street Journal, titled "ASE Provides an Update related to its Kaohsiung Facilities." In its statement, ASE "firmly denies all of the allegations that the company had deliberately discharged contaminated wastewater..." and promises to invest more in water recycling. ASE emphasized that some of its plants have been rewarded certifications, such as EEWH (Ecology, Energy saving, Waste reduction and Health) and LEED (Leadership in Energy and Environmental Design). Moreover, ASE "pledges to contribute at least NT\$100 million per year for the next 30 years with a minimum total amount of NT\$3 billion to Taiwan's environmental protection efforts." Despite issuing its statement on the international paper, ASE managed to resume operation for its K7 plant. It filed an administrative appeal against the cessation order issued by the EPBKCG on January 17, 2014, while submitting water pollution control measures and sludge treatment improvement plans to the EPBKCG. After two rounds of audit meetings held on February 14 and March 20, respectively, the Kaohsiung City Government approved ASE's bid to perform trial operation (Apple Daily, 2014/03/25). ASE also donated LED lights to elementary schools in Kaohsiung City and claimed that it would sponsor environmental research projects for 5 universities in Southern Taiwan (Liberty Times, 2014/06/17).

**Local Community Demands "Real" CSR** The local citizens and environmental groups argued that ASE did not truly face its misconducts or deal with real environmental damages caused by its untreated wastewater. They demanded ASE to invest in zero wastewater discharge facilities or make its effluent comply with the irrigation water standard, restore the rivers' ecosystem from the damages that it had caused, and provide compensation for the losses suffered by farmers and fishermen in order to fulfill its CSR (CET, 2014). They also urged that the donations by ASE should be allocated for river pollution prevention, investigation, and restoration rather than LED



lights installation for elementary schools that did not even meet the schools' needs. However, ASE has promised none of these efforts.<sup>2</sup>

To hold ASE socially accountable, Citizen of the Earth, Taiwan (CET), an environmental group based in Kaohsiung City, initiated a joint statement letter signed by 50 international NGOs from 18 countries and appealed to ASE's international purchasers such as Apple, Intel, and etc. In the letter, CET revealed ASE's environmental records and its attempts to exclude public supervision on K7 trial operations and prevent the stakeholders from participation in multilateral communications. The letter asked the brands to stop its business with ASE until it complies with the environmental and labor right standards promised by the brands' CSR reports. On the other hand, CET also demanded ASE and Kaohsiung City Government to make wastewater discharge data transparent and progressively invited the concerned citizens to participate in the supervision meetings.

*Lenient Laws and Exclusion of Public Audit Promote Superficial CSR* As mentioned, Kaohsiung City's Environmental Bureau ordered suspension of K7 and ASE appealed to resume K7's operation. The civic groups and local communities have requested to participate in the audit meetings where the discussions of facility inspection and resumption operation took place.<sup>3</sup> However, the environmental bureau refused the public requests, stating that the case "is related to wastewater treatment, which is the technical issue that relies on professional judgement and assessment. Because it is not the issue to "ask for the public's opinions," the bureau cannot accept the request for public participation in the ASE auditing meetings.<sup>4</sup> Based on the above statement, it is apparent that the government has no intentions to make the audit process transparent and accessible to the public or actively make the companies' non-compliance records public.

On July 30, 2014, the first review of the trial operation was carried out and a conditional resumption of business was approved (China Times, 2014/07/31). The controversy seemed to come to the end when the ruling was made by the Kaohsiung District Court on October 20, 2014. ASE was found guilty of releasing untreated industrial wastewater into the Houjin River. In addition to a fine of NT\$3 million (US\$95,000) imposed on the company, the K7 plant director and three other employees were given suspended sentences ranging from 16 to 22 months for violation of the Waste Disposal Act, while the company chairman and executive vice president were not convicted of any crime (Taipei Times, 2013/12/21). Appeal filed under Article 190 of the Criminal Code was rejected by the court since the samples gathered by locals were unable to justify ASE as the sole polluter (Apple Daily, 2014/10/20). The rejection was also made in reference to the fact that five universities refused to conduct the relevant studies for technical reasons when demanded by the court (China Times, 2014/10/21). The prosecutors called the ruling "unacceptable," and "vowed to file an appeal to discourage other operators from committing similar violations" (Taipei Times, 2013/12/21).

It is clear that the cost of violating the Water Pollution Control Act and a fine of NT\$3 million have no deterrent effect on a company with an annual income of over NT\$200 billion. The local government did not take up the issues of ecosystem restoration or compensations for farmers and fishermen. The central government's stance was also dubious as the Minister of Economic

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<sup>2</sup> Email correspondence with T, March 12, 2014.

<sup>3</sup> CET, 2014/07/18. CET103017 (Official document to EPBKCG).

<sup>4</sup> EPBKCG, 2014/08/28. Kaohsiung City Environmental Tu Zi No.10338620100. In this official document, it states that "the administrative organization or review committee shall enjoy broad authority in terms of professional judgment and assessment in wastewater treatment technology application related issues, and the nature of such cases are different than that for policy communications and public opinion hearings."

Affairs did not affirm to recall tax incentives awarded to ASE for its misconduct (Taipei Times, 2013/12/17), but stated that a longer shutdown might cause negative impact on the country's GDP (Taipei Times, 2013/12/24).

*No Multi-Stakeholder Engagement, No Supply Chain Responsibility* Numerous brands require their suppliers to fulfill their CSR, which highly rests upon the laws/standards promulgated in host countries. For instance, EICC considers the code to embody “the understanding that a business, in all of its activities, must operate in full compliance with the laws, rules, and regulations of the countries in which it operates” (EICC 2012, 1). As the brands still incline to uphold local compliance as a way to evaluate the CSR commitment of the suppliers, following incompetent laws cannot fulfill supply chain responsibilities. In particular, when the local laws do not provide strong mechanisms to implement information transparency or engage stakeholders in impartial investigations, the resourceful and politically influential players such as ASE can easily manipulate its way to gain “local compliance” as shown in this case study. It is evident that the brands did not learn about ASE's persistent environmental violation records until CET organized the data and opened discussions internationally with ASE's major buyers.

Although the brands address information disclosure and stakeholder engagement as part of their CSR commitment, such commitments do not extend to their suppliers as part of the supply chain responsibility. In response to the open letter to the brands from CET that brought attention to ASE's misconducts, the brands seemed to focus only on the technical assistance and compliance issues to dismiss the voices of local stakeholders. One company replied that it would “actively investigate the situation” and would “work to ensure that ASE applies the required corrective actions.”<sup>5</sup> It will also send an engineer to participate in the site review operation.<sup>6</sup> Another brand-name company stated that its representatives would follow up with the issue and reach out to EICC.<sup>7</sup>

Without engaging multi-stakeholders in a proper process, the brands have no way to learn the local environmental damages caused by their supplies under the disguise of “local compliance. The brands have also failed to comprehensively realize the CSR practices of their suppliers. As a result, the company's wrong doings can easily escape from public scrutiny and the firms made little progress to fundamentally change their practices. CET expressed its disappointment that the claim made by the super giant brands, “we are committed to environmental responsibility and recognizing the stakeholders' rights,” is merely an empty talk (CET, 2014). In fact, notwithstanding ASE's misconducts, Apple still placed a large order with ASE, which became one of Apple's top 200 suppliers in 2015.<sup>8</sup>

**Conclusion.** It is evident that the fabless brands were unable to monitor or document the actual CSR practices of their suppliers without engaging the local concerned stakeholders. It was not until a citizen group in Taiwan gathered all of the data on a series of ASE misconducts and presented them to the public did its product purchasers notice the issue and further the investigation. Nonetheless, the notion of stakeholder engagement to monitor the CSR practices have been neglected by the local government as the action is neither authorized by the law nor supported institutionally by the brands to supervise supply chain responsibility. By leaving out the local citizen groups in the investigation processes, the firm made little progress to fundamentally change their practices and easily went back to their old practices as usual. In

<sup>5</sup> Email correspondence with I, March 12, 2014.

<sup>6</sup> Email correspondence with I, April, 24, 2014.

<sup>7</sup> Email correspondence with A, March, 11, 2014.

<sup>8</sup> Apple's supplier List 2015, [https://www.apple.com/supplier-responsibility/pdf/Apple\\_Supplier\\_List\\_2015.pdf](https://www.apple.com/supplier-responsibility/pdf/Apple_Supplier_List_2015.pdf) (accessed April 22, 2015).

reality, ASE has failed to take responsibility to restore the river ecosystem or compensate the locals' loss. All it did was throwing money into something that is quite irrelevant. One of ASE's international buyers thought that ASE could do better if its money is relocated to a cleanup fund.<sup>9</sup>

In fact, if the concerned stakeholders can actively engage in the investigation process, the resumption of K7 may be more reliable and legitimate. The multi-stakeholder approach thus matters in this case because it fills the void of insufficient regulations and incompetent agencies. Apple's partnership with Institute of Public and Environmental Affairs (IPE) to assess suppliers' violation records in China has approved to be effective (Apple, 2015). The concerned citizens and civic groups have been standing in the front line to detect the problems and protect the local environment. Excluding them from the audit process would only weaken the environmental management and supply chain responsibility efforts. Drawing the lessons from this case study, we argue that it is necessary to improve the multi-stakeholder approach throughout the supply chain management process in order to close the gaps between supply chain responsibility and their actual practice at the local level. Furthermore, the information disclosure rules and stakeholder participation principles should be emphasized and reinforced as a part of supply chains' obligations.

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<sup>9</sup> Email correspondence with A, February, 27, 2015.



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