INTEREST GROUPS AND ELECTRONIC WASTE MANAGEMENT POLICY

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Abstract

The world is now seeing a surge in electronic waste, often known as "e-waste", and Thailand is Southeast Asia's second-largest generator of e-waste (Forti, Baldé, Kuehr, & Bel, 2020; The Momentum, 2018). Since the bulk of policymakers is linked with interest groups and political pressures, Thailand has been collecting such issues for a very long time. Thus, the relationship between interest groups and policy in Thailand's e-waste management was investigated using qualitative methodologies, an in-depth interview, and documentary research. The findings noted that the current e-waste management bill may be advantageous to all sectors since it offers realistic rules and effective mechanisms for e-waste management. Prior to the Waste Electrical and Electronic Equipment Management Act's implementation, a number of issues must be reviewed, including the determination of the e-waste product type, insufficient law enforcement, a suitable take-back mechanism, public education, waste management technologies, and responsibility distribution. Moreover, several studies have demonstrated the connection between interest groups and e-waste management. Priority should be given to educating the public about the need for electronic waste management, followed by allocating duties to each sector equitably and appropriately.

Keywords: Electronic Waste, Electronic Waste Management, Interest Groups, Waste Electronic and Electrical Equipment

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1. INTRODUCTION

The technological advancements that have aided the country's economic and social development have accelerated the development of new technologies and innovations related to electronic items. Individuals' everyday lives have become more dependent on the use of multiple electronic gadgets, resulting in a considerable volume of waste or scrap materials from expired or outdated electronic items (Shittu, Williams, & Shaw, 2021). In 2019, the world produced 53.6 million metric tonnes (Mt) of electronic waste (e-waste), with just 17.4% of this formally recycled (Forti, Baldé, Kuehr, & Bel, 2020). Therefore, the world is now experiencing an increase in electronic trash, more commonly referred to as e-waste or waste electronic and electrical equipment (WEEE) (Nithya, Sivasankari, & Thirunavukkarasu, 2021). According to The Momentum (2018), Thailand is Southeast Asia's second-largest producer of

electronic waste after only Indonesia. It generated an average of 380,605 tonnes of e-waste per year from 2013 to 2016, representing an annual increase of approximately 2.2%. Up to 64.8% of all hazardous garbage generated in neighbourhoods consists of e-waste; 51.27% is sold, 25.32% is stored in houses, 15.6% is disposed of as general garbage, and 7.84% is donated. The bulk of electronic trash in Thailand is disposed of or recycled by a group of retailers or antique dealers that use disassembly procedures that do not adhere to academic requirements (E-waste Green Network, 2019). Improper e-waste recycling and disposal results in the release of toxic substances (such as lead, cadmium, mercury, and arsenic) into the environment and affects human health (Rautela et al., 2021). Residues and accumulations have a direct influence on human health and the environment, causing short-and long-term harm to surface water supplies, groundwater resources, and ecosystems as well as poor air quality (Yingpaiboonwong, 2017).

Recently, Thailand has several laws governing the handling of obsolete electronic products and appliances, including the Enhancement and Conservation of National Environmental Quality Act, B.E. 2535 (1992)[1], the Hazardous Substances Act, B.E. 2535 (1992)[2], and the Public Health Act, B.E. 2535 (1992)[3] (Sasaki, 2018). However, such rules do not govern with the explicit intention of requiring the proper disposal of obsolete electrical and electronic goods. As a result, they are incompatible with solid waste management and their enforcement is insufficient and inefficient for the proper disposal of outdated electrical and electronic products (Nueangnong, 2019). Thailand has been working on legislation to regulate electronic waste since 2004, but the Waste Electrical and Electronic Equipment Management Bill, B.E. 2558 (2015) is still in the process of modifying the Act's provisions, which date back over 18 years, and the amendments have not yet been released (Pollution Control Department, n.d.). This might be a result of political interest groups, personal connections, or organisations founded on fundamental beliefs that seek to influence policy in the desired way. The main goal of these parties and advocacy groups is to engage in lobbying politics (Chumphon, 2007). Similar factors affecting economic interest groups' power and effectiveness exist in the policymaking process, such as the social standing of a wise and strong leader. In other words, it relates to leadership and a thorough sense of the extent of advantages. The potential for a positive impact on a particular policy may result from interest groups exerting a broad influence on decision-making (Bloodgood, 2011). Such interest groups may contribute to the improvement of policymaking by leveraging their knowledge, skills, abilities, and extensive data on specific subjects. They might, however, represent advantages that could have a detrimental impact and are unintentionally affected by ill-intentioned governmental policies (Organisation for Economic Co-operation and Development [OECD], 2009). Additionally, because these groups monitor the legal and regulatory processes, they play a critical role in holding the government accountable for the country's public interest. Initially, the behaviour of "lobbyists" was perceived negatively; nevertheless, excellent lobbyist characteristics are something that a leader should possess (Ihlen et al., 2018). The policy movement is the result of the collaboration of several parties, including political power, social power, and scholarly power. The term "political power" refers to the process of acquiring power through the passage of legislation (Hall, 2020).

Thailand has been accumulating such challenges for a long period of time. Solving problems takes time since the majority of policymakers are affiliated with interest groups and political influences. Additionally, it has been shown that such entities have conflicts of interest when it comes to implementing government initiatives or regulations. This situation applies to Thailand's previous efficiency and efficacy of anti-corruption efforts. Although there has been a concerted attempt to avoid and solve this problem, such as continuously executing preventative measures and repression, the corruption has not been completely eradicated. The researcher, therefore, examined the political relationship between interest groups and policy in electronic waste management in Thailand. The aim of the research is to evaluate the policies governing electronic waste management in Thailand as well as the political interactions between interest groups that impact the country's e-waste management policies. To achieve such objectives, the study was divided into two sections: 1) exploring Thailand's policies on electronic waste management and 2) analysing the relationships between interest groups and e-waste management in Thailand. The first part was examined by an in-depth interview conducted with various relevant interest groups, while the second one was investigated through document analysis. The study's findings can be used to establish good governance for interest groups influencing policymaking in electronic waste management.

The remainder of this paper is structured as follows. Section 2 is a review of the relevant studies. Section 3 goes into the study's methodology. Section 4 highlights the main findings. Section 5 shows the discussion and interpretation of the findings. Section 6 is the conclusion, consisting of a discussion of the significant results, their consequences, study limitations, and future research perspectives.

2. THEORETICAL REVIEW

In the great majority of nations, e-waste created at home is handled in three ways: disposal in rubbish bins, formal collection by state entities, and informal collection by private waste vendors and companies (Shittu et al., 2021). Formal recycling will recycle collected e-waste at facilities employing cutting-edge technology, machinery, and infrastructure for the secure and effective removal of useful materials. Informal recycling refers to the processing and recycling of e-waste collected outside the formal system, such as by individual waste companies or dealers, under sub-optimal conditions with primitive techniques and typically without provisions to reduce the emission of hazardous chemicals into the environment (Murthy & Ramakrishna, 2021).

[1] https://www.pcd.go.th/wp-content/uploads/2020/05/pcdnew-2020-05-25_08-11-51_671063.pdf
[2] http://web.krisdika.go.th/data/outsitedata/outsite21/file/Hazardous_Substance_Act_B.E._2535.pdf
[3] http://web.krisdika.go.th/data/document/ext838/838066_0001.pdf

E-waste that is discarded in landfills or given to vendors typically ends up harming the environment by leaking into soil and groundwater, as well as through exposure into the surrounding atmosphere, land, and surface water (Cesaro, Alessandra, Kerstin, Belgiorno, & van Hullebusch, 2018). A large quantity of valuable resources is also lost via improper waste disposal and recycling. Therefore, formal e-waste recycling is the safest method of e-waste management. However, recent estimates indicate that only about 9.3 Mt (17.4%) of the worldwide e-waste produced in 2019 has been gathered and processed in the formal sector, having left the rest of 44.3 Mt (82.6%) of e-waste unrecorded (Forti et al., 2020). To remedy the problem, several nations have enacted policies, laws, and regulations on e-waste disposal. Global e-waste policies and regulations are vital because they provide a level of standards and directions to govern the behaviour of stakeholders who are closely associated with e-waste in the public and private sectors. Currently, according to Baldé, van den Brink, Forti, van der Schalk, and Hopstaken (2018), e-waste legislation has been implemented by 71% of the world's countries; the remaining 29% have yet to build a legislative framework to ensure legal practices for sustainable e-waste disposal. Even in nations with e-waste regulations, there are still illicit imports and activities. The economic condition of an Asian nation influences the creation and management of e-waste throughout the continent. China, for instance, is the largest producer of e-waste in Asia and the globe, as well as a major home for e-waste generated worldwide. Many Asian nations have suffered for decades from the illegal import and processing of e-waste (Alghazo, Ouda, & El Elhassan, 2018). South Asia has acknowledged the necessity for proper e-waste management, and China, Japan, India, Korea, and Singapore have adopted regulations governing e-waste management. Most Asian nations are following the guidelines of the European Union to develop a model for e-waste regulatory systems (Patil & Ramakrishna, 2020). To support the circular economy, many laws have been passed, such as the Extended Producer Responsibility (EPR), Producer Responsibility Organization (PRO), and Restriction of Hazardous Substances (RoHS) Directive, as well as permits and licences for the safe disposal of electronic waste.

In Thailand, efforts to pass a law governing the recycling of domestic appliances date back to 2004. Material flow estimations for WEEE were undertaken for the first time in 2003, with the assistance of the Japan External Trade Organization (JETRO) (Sasaki, 2018). The initial draught of the bill was introduced in 2004 by the Pollution Control Department (PCD). Subsequently, each time the regime changed, the bill was significantly altered (Jermsittiparsert, Namdej, & Somjai, 2019). The following are developments on the Thai WEEE Management Bill. PCD proposed a draught of the Act on the Management of Hazardous Waste from Used Products[4] in 2004. Then, the Cabinet approved Phase I of the Integrated WEEE Strategy in 2008. After that, PCD proposed a draught of the Act on Fiscal Measures for the Environment in 2010 and a draught of the Act on the Management of WEEE and End-of-life Products in 2014. In 2015, Phase II of the Integrated WEEE Strategy and the draught of the Act on the Management of WEEE and End-of-life Products were approved. In 2017, PCD proposed a draught of the Act on the Management of Waste Electrical Products and Electronic Equipment. Instead of manufacturers carrying the financial burden of WEEE management, manufacturers are now responsible for WEEE collection. The 2017 household appliance recycling bill is remarkably different from previous versions. Similar to the Chinese home appliance recycling bill, the recycling fee was collected in advance from creators and importers, and when consumers and municipalities brought unwanted electronics to the permitted depots managed by private companies, the depots acquired these devices (Sasaki, 2018). In 2021, PCD submitted the draught WEEE Act, which outlines the duties and obligations of all parties involved, including producers, importers, sellers, consumers, municipal authorities, and recycling facilities for e-waste. The manufacturer is responsible for increasing the recycling-friendliness of products, decreasing the usage of hazardous ingredients, and adhering to the principle of extended producer responsibility (EPR) (Nueangnong, 2019).

Interest groups are alliances of people or organisations that share one or more interests to influence or gain widespread popularity in public policy. Interest groups' strategies and tactics for driving their goals might be done directly or indirectly. For example, they may consult consultants or attorneys (known as professional lobbyists) to investigate methods to influence legislation and policymaking. Various tactics may be employed, for example, directly negotiating with government officials to engage in the preparation of public hearings, reporting policy concerns to government officials, as well as, posting an opinion on social media (Chari, Hogan, Murphy, & Crepaz, 2019). The impact of interest groups on policymaking is not a corrupt or immoral activity in and of itself, but rather a critical component of the decision-making process (Zinnbauer, 2009). However, the benefits and drawbacks of interest group influence will vary depending upon whether power such parties have and how power is divided among them (Dür & De Bievre, 2007). Less evidence supports the clear advantages that may arise from the influence of interest groups on decision-making. In practice, interest groups can influence policymaking by providing pertinent information and expertise on specific topics. In addition, they represent interests that may be accidentally harmed by a poorly conceived public policy (OECD, 2009). Moreover, because these organisations monitor legislative and regulatory proceedings, they serve an essential role in holding the government accountable (OECD, 2009). According to Campos and Giovannoni (2008), in transition nations, the influence of interest groups through lobbying is a substitute for corruption as a tool of political power. Therefore, in this setting, lobbying, if appropriately controlled, is a far more successful tool than corruption for exerting political influence, and lobbying is also a significantly more powerful component in explaining corporate performance than corruption. Previous research has also demonstrated that the intensity of lobbying rises with money, and that

[4] https://www.jetro.go.jp/ext_images/thailand/e_activity/pdf/manual1.pdf

lobby group members are substantially less inclined to accept bribes. However, in politically unstable countries, corporations are more likely to bribe and less likely to join a lobbying organisation (Campos & Giovannoni, 2006). If interest group power is unclear and inappropriate, it can result in administrative bribery, political corruption, undue influence, and state domination. In contrast to bribery and political corruption, which are more obvious types of corruption, undue influence is more subtle and not always illegal (Campos & Giovannoni, 2017), implying that interest groups can exercise influence on policymakers without making illegal payments (Martini, 2012). In this setting, interest groups will attempt to cultivate a "sense of reciprocity" with a public figure by, among other things, making legal campaign donations, hosting receptions, and providing research (OECD, 2009). In addition to providing public officials with attractive employment in exchange for their assistance in producing laws, or by placing former ministers and legislators in lobbyist groups, it is also feasible to create excessive influence (OECD, 2009).

Numerous studies demonstrate the impact of interest groups on environmental policymaking. Anger, Asane-Otoo, Böhringer, and Oberndorfer (2015) evaluate the influence of lobbying activities on allocations of emission permits under the EU emissions trading scheme (ETS). They conclude that the advocacy of energy-intensive companies within the ETS transfers the regulatory burden of emission reduction to sectors not subject to the ETS. Consequently, the marginal abatement costs of ETS and non-ETS businesses fluctuate inefficiently. Livermore and Revesz (2015) analyse and explain the positions of the major interest groups over the past four decades regarding two central questions of environmental policy to determine the appropriate policy objective and the instrument that should be utilised to implement the policy. The results reveal that the responses of environmental groups and industrial groups are often influenced by the gains and losses they encounter due to environmental laws and policies. According to Marris (2019), the pressure of young climate activists can lead to more stringent greenhouse gas abatement policies. Hagen, Altamirano-Cabrera, and Weikard (2020) investigate the impact of political lobbying on individual nations' transboundary emissions and the long-term viability of international environmental treaties to cut emissions. Their findings show that non-signatory advocacy groups will only have an impact on abatement in the lobby's home nation. Lobbying efforts in signatory countries, on the other hand, have an influence on abatement decisions in other member countries.

Most studies on the influence of interest groups on environmental policymaking concentrate on the role of producer groups and stakeholders. However, there are few studies examining the political relationships between interest groups that influence e-waste management policies in a country. The examination of the political relationship between interest groups and policy in electronic waste management in Thailand will provide some good governance for policymakers and lobbyists.

3. METHODOLOGY

The aim of the research is to evaluate the policies governing electronic waste management in Thailand as well as the political interactions between interest groups that impact the country's e-waste management policies. The study's findings can be used to establish good governance for those who influence policymaking in electronic waste management. To achieve these aims, qualitative approaches, an in-depth interview along with documentary research, was conducted as follows.

3.1. An in-depth interview

This technique was used to analyse the policies governing the management of electronic waste in Thailand by studying the perspectives of the relevant stakeholders regarding the practicability of the new WEEE Management Bill and the challenges they may face as a result of the bill. To begin with, relevant studies and theories on electronic waste management and environmental interest groups were investigated in order to develop a study framework. The research framework, which is the current WEEE Management Bill, was then used to develop a draught of in-depth interview questions.

In 2021, the WEEE Management Bill was introduced to establish guidelines for e-waste management in Thailand in order to provide a more effective solution to the country's waste problem (Ministry of Natural Resources and Environment, 2021). This bill was shared with the public in order to allow for public feedback so that it may be developed prior to the Act's announcement. The following are the major points of this bill (Thai Government, 2021):

1. The Departments of Local Administration, Provincial Administration, and Industrial Works are allowed to establish a location for the return of electronic trash from the public. Then this waste will be appropriately managed, along with the establishment of a monitoring and reporting system to guarantee that e-waste is correctly managed, all within a one-month time frame.

2. The Department of Disease Control and the Department of Health are tasked to monitor the health consequences of incorrect electronic trash disassembly and recycling. Additionally, The Pollution Control Department, the Industrial Works Department, the Regional Environment Office, and the Provincial Offices of Natural Resources and Environment are appointed to monitor pollution contamination and work to mitigate its adverse impacts on the environment.

3. Prior to the passage of the new Act, the Ministerial Regulation: Communal toxic or hazardous solid waste management B.E. 2563 (2020) may be used to manage e-waste. The Department of Health is responsible for issuing Ministerial Regulations designating electronic waste to dismantle enterprises as hazardous to health. On the basis of Section 31 of the Public Health Act, B.E. 2535 (1992), guidelines for the hygiene practices of demolished enterprises and ecologically appropriate separation procedures should be devised. All of them should be completed within three months.

4. The Department of Local Administration encourages municipalities to adopt local laws that adhere to the principles established by the Ministry of Public Health. According to Section 32 of the Public Health Act, B.E. 2535 (1992), this bill seeks to categorise electronic waste dismantling as a hazardous enterprise, allowing authorities to tighten their oversight of dismantling businesses. All processing timeframes for activities must be completed within six months.

5. The Pollution Control Department, the Department of Industrial Works, the Department of Local Administration, the Department of Health, and the Office of the Council of State were tasked with drafting the Waste Electrical and Electronic Equipment Management Bill in order to establish an efficient electronic waste management system based on the principle of extending manufacturers' responsibility. These tasks must be completed within a twelve-month period.

6. To address these obstacles, the National Research Office, the Department of Primary Industries and Mines, and the Federation of Thai Industries have been charged with developing technologies and advancements.

Following that, the validated questions were employed for an in-depth interview. The key informants are professionals involved in electronic waste management and e-waste policymaking. Because of their sophisticated knowledge and experience with e-waste, these individuals were chosen through purposive sampling to represent policymakers and interest groups. The respondents were divided into two groups, as shown in Table 1.

Table 1. Key informants

Key informants		*No. (persons)*
Policymakers	Environmental sector	3
	Industrial sector	3
	Political sector	3
	Public health sector	1
Private sectors	E-waste recycling companies	5
	Local administrators	5
Total		20

The first group represents policymakers who have a thorough understanding of the Thai political settings that impact the interests of political corporate groups in Thailand, as well as social phenomena that are critical to the formation of Thai environmental policy. This group consists of the industrial sector (state officers from the Ministry of Industry and the Federation of Thai Industries), environmental sector (state officers from the Ministry of Natural Resources and Environment and the Pollution Control Department), political sector (state officers from the Ministry of Interior, the Department of International Trade Promotion, and the Customs Department), and public health sector (a state officer from the Ministry of Public Health). The second group represents interest groups that have been impacted by the enforcement of e-waste management policies. This group includes electronic waste recycling companies and local administrators.

3.2. Documentary research

This technique was used to examine the political relationship between interest groups and policy in electronic waste management in Thailand by researching relevant documents such as books, academic journals, official websites, and other reliable materials. After that, the selected contents were analysed and interpreted.

3.3. Alternative method

Due to the difficulty of measuring the extent of the link between interest groups and e-waste management policies, the empirical data to support the hypothesis may be limited. In addition, an in-depth interview may be biassed due to the perspective of key informants and each group's competing interests. For future research, to eliminate such bias, a larger size of sample may be examined. One of the most suitable methods to measure influence for a large population is the "degree of preference attainment" approach as it can detect influence even if nothing visible happens (Horváthová & Dobbins, 2019). Moreover, participants must show that they have no conflicts of interest with policymakers.

4. RESULTS

4.1. Thailand's policies on electronic waste management

This issue focuses on EPR which is the core of the new WEEE Management Bill. The bill is based on the principle of EPR, which stipulates that producers are responsible for managing waste or end-of-consumption products by organizing systems or retrieval mechanisms in order to be handled properly. Although EPR is the general concept used by worldwide nations, it is new in Thailand. The interview focuses on whether or not the new WEEE Management Bill can be implemented and whether or not it would provide difficulties for the parties involved. Table 2 shows the summary of each sector's perspective on the new WEEE Management Bill.

Table 2. Interest groups' perspectives on the current waste electronic and electrical equipment (WEEE) bill.

Interest groups	*Comments*
Environmental sector	*Pros:* classification of regulated e-waste according to the EPR concept; contribution to the management of hazardous communal trash. *Cons:* incapable of identifying the types of products to be regulated.
Political sector	*Pros:* well-defined roles and obligations of the relevant sectors. *Cons:* no definitions of roles and responsibilities of all waste disposal sectors.
Industrial sector	*Pros:* clearly defined responsibilities and functions of the relevant sectors. *Cons:* no definitions of the duties and responsibilities of various waste disposal sectors, raising significant concern about the take-back system.
Public health sector	*Cons:* insufficient information regarding the effects of inappropriate e-waste disposal and the new return method for e-waste disposal, resulting in no motivation for separating e-waste from general waste.
E-waste recycling companies	*Cons:* due to obsolete recycling infrastructure, e-waste recycling companies are unprepared for the WEEE law's implementation.
Local administrators	*Pros:* the equitable distribution of responsibility across all sectors enables local administrations to dispose of e-waste more effectively.

The environmental sector recognises that Thailand does not have an effective waste product management system covering the correct storage, collection, sorting, disassembly, and disposal of waste products in accordance with academic principles and a methodical approach. As a result, there is contamination in the environment, which may be hazardous to the disassembler's health and accumulate in the environment. The EPR concept will enable government authorities to establish the categories of regulated items. The provisions of the law can be applied to the management of hazardous community waste, such as electrical and electronic waste products and other waste products that are difficult to eliminate or manage, have a high cost, or do not currently have a good and safe management system, such as used tyres, used lubricants, and chemicals, or even car wrecks and motorcycles. However, the bill does not identify the sorts of items to be regulated. Instead, it appoints a Product Waste Management Committee comprised of members from all sectors to assist in determining the product type, which will be notified by the ministry later.

The political sector states that the current waste management laws do not define the roles and responsibilities of all sectors in waste disposal, whereas the new bill defines the scope of duties and responsibilities of the relevant sectors in light of the fact that end-of-consumption products are distributed to consumers, both individuals (households) and businesses. The challenge of the EPR strategy is developing a system that allows customers to return product leftovers to a producer-generated system (called a take-back system). Consequently, the key aspects mandated by law are as follows: developing an efficient take-back or collection system; promoting public awareness; providing customers with incentives to return end-of-life items; and defining collection targets. Furthermore, law enforcement is equally as vital as legislation. Although Thailand does not currently have legislation governing the disposal of electrical and electronic waste, there are a number of rules governing waste products and management. However, insufficient law enforcement is one of the most significant impediments that undermine the law's efficacy and efficiency.

The industrial sector gives comments similar to the previous groups, yet extends their standpoints on a take-back system, as the determination of the volume of waste product collection has historically been a contentious issue for manufacturers, who have argued that they lack the authority to direct consumers to return the product to the system. Targeting waste collection is an important government tool to encourage manufacturers to take serious product recalls. It is an indispensable part of the EPR law, otherwise, the manufacturer may do so just to provide a legal return point, but not carry out publicity and incentives for the recall of the end product from the consumer. Targeting waste collection is a key government strategy for encouraging manufacturers to conduct comprehensive product recalls. It is an essential component of the EPR law, without which the producer may just give a legal return site, but not conduct advertising and incentives for the recall of the final product from consumers.

The public health sector emphasises raising awareness on the impact of e-waste (including hazardous waste from other types of communities) since it is a fundamental factor and an urgent matter that must be taken before the issuance of this law. If governments and agencies can disseminate information to the public about the problem of improper handling of waste products and inform the government's new return mechanism for the safe disposal of the waste products, it will make people aware and cooperate in bringing the remains of products to be returned to the channels that the government/manufacturers have set.

Although most e-waste recycling firms are prepared to implement EPR, others are concerned about outdated technology and the associated expenses. Currently, there is no comprehensive e-waste management system that includes collection, sorting or disassembly, transportation, recycling, and disposal. Few manufacturers and suppliers have created a take-back programme, placing a load on local government agencies. The recycling technology and hazardous material treatment of recycling businesses in the country is a further impediment to effective e-waste management since many recycling operators only accept electronic components from which technology can be developed to extract valuable metals. Methods and technologies for the treatment of hazardous substances contained in waste products or scraps left over from disassembly or recycling differ between domestic and foreign entrepreneurs due to the fact that domestic entrepreneurs have not invested heavily in this area due to high investment costs.

Similar to the responses of other parties, local administrators express their dissatisfaction with the present poor e-waste product management system and the ineffectiveness of recent policies. The existing procedures place a heavy burden on the local administrative sector, despite the fact that they have not developed adequate e-waste policies and must compensate for waste disposal in their responsible communities. Nonetheless, the new measure is anticipated to divide responsibilities across all sectors, and local administrations may be relieved of overburdened duties, allowing them to work more efficiently on e-waste disposal.

4.2. The relationships between interest groups and e-waste management in Thailand

Research on the building of political links between policy interest groups affecting e-waste management in Thailand examines the process of leveraging "power" via a "relational structural mechanism" to propel the development of an e-waste management system. According to the report, policy interest groups that have an impact on Thailand's e-waste management include the government network, the public sector, private industry, and nongovernmental organisations (NGOs) (Chaiyong, 2021). These parties have what are known as "patronage relations", which may be viewed as a significant source of political negotiating power. These interest groups offer elites patronage in terms of influence. Additionally, interest organisations' economic operations toward the economy are a significant negotiating factor, particularly those that enjoy widespread public backing (Varkkey, 2012).

The following are the policy formation procedures in which interest groups were involved, according to Thirasirikul (2020). At the beginning stage, interest groups will be critical in highlighting to policymakers which topics are so critical that they require government discussion and resolution. At this stage, interest groups are typically involved as a representation of the nation's population to demand, often referred to as an input function. At importing an agenda, interest groups assist with data input in order to expedite the presentation of the policy and to influence decision-making at this stage. The interest group's functioning will be critical in terms of first lobbying. Policy formation is the method through which policymakers include a subject in the process of drafting legislation or plan. This procedure must be approved by the constitutional authority or another appropriate official. At this point, the legislature or other political institutions, such as political parties often assume responsibilities. As such, it is a time at which interest groups will attempt to mobilise resources in order to convince the individual or group making the choice, as well as organise public opinion to conform. At this point, various interest groups attempt to embrace potential strategies and ways for battling one another. The lobby is a frequently used strategy. Throughout the policy implementation process, interest groups that exist as policy stakeholders will either support or oppose the policy. They will identify the policies' strengths and drawbacks in order to revise and strengthen them. Legislatively approved policies are frequently enacted by regulations, executive orders, or laws. Implementing those policies has both direct and indirect consequences on interest groups, demonstrating both positive and negative characteristics. For instance, the Electronic Waste Management Act may have a direct effect on the professional group responsible for electronic waste sorting and electronic goods vendors. Thus, there will be additional issues about which interest groups may oppose or support, depending on the magnitude of the benefits and disadvantages received by interest groups. Policy assessment is the process of providing feedback to policymakers regarding the impact of established policies, so that they may determine if the policies need to be changed. At this stage, interest groups advocate for policies and represent the reactions of persons impacted by them to other political institutions, including the government, in order to show the policy's outcome.

Considering the impact of imports of electronic products and electrical appliances with low quality and short service life whether it is legally imported or smuggled from a group of investors with conflicts of interest, it will result in expired or unused products at the end of the electrical and electronics industry supply chain (Abalansa, El Mahrad, Icely, & Newton, 2021). According to Prachumdang, Potiwan, and Poncharoen (2020), interest groups in Thailand have had a role in pushing environmental policies and legislation through the decision-making process. Interactions between groups will establish relationships between civil society groups or between other groups and governments. Such a relationship will result in the fulfilment of policy interests and the exertion of effort to align policies with the demands of their respective groups. This is seen via the dissemination of information from one group to another through participation in policy-making processes. This interchange may be intensified if these parties have access to government decisions and participate in policy formulation.

Thus, advocacy and policy formulation are crucial activities in the political system as state policies and government necessarily influence many sections of society; as a result, members of political society are those who are directly affected by the policy's substance (Roebeling & de Vries, 2011). As with any policy process, it is complicated because it involves political actors that must participate in decision-making through the exercise of state authority and influence in developing policies that are contextually appropriate for the country before implementing the policy. Taking into account the political environment in which Thailand's policymaking and e-waste management systems operate, the researcher focuses on the "process" of acquiring the policy rather than on the policy's core or content. As a result, the policy-making process is the subject of several powers, which is a significant challenge. The policy process is recognised to follow a three-stage cycle: the first stage is policy formation; the second stage is policy implementation, and the third stage is policy assessment. However, each stage frequently includes a procedure for exerting authority. In the first phase, namely the policy-making process, political players amass considerable authority. As a result, this stage serves as a platform

for policymaking or a platform for policies that are brimming with power. This is seen as a critical political feature in the creation of Thailand's e-waste management system policy.

5. DISCUSSION

Interest groups that impact the management of electronic waste in Thailand consist of members who share a similar interest in their primary activity. When their integration is effectively executed and they are well-organised and functioning, they are able to generate power and change into organisations with influence and authority over the government and the administration of the country. According to Prachumdang et al. (2020), the presence of interest groups in political roles has both beneficial and negative consequences. Political interest groups will have access to an economic network that will boost their prospects of expanding the country's economy internationally. It will boost the nation's economic competitiveness as a result of the participation of business experts from interest groups. The detrimental impact was caused by their use of gained information, skills, and connections for their own profit. Noisommit and Kantiya (2019) state that clan influence existed so that citizens may have intimate contact with the government, including influencing the government to design policies and administer the work according to their intentions. Establishing a private organisation, comprised of individuals with similar interests, such as those in business, labourers, farmers, government officials, state enterprise officials, or collectively by race or religion, requires the use of a crucial instrument. Consequently, such interest groups will have a significant impact on adjustments and revisions to the government's policies (Martini, 2012). For social power, advocates mobilise their networks of bill supporters and establish a more defined allocation of tasks within the movement. This is aligned with Taylor, Vasquez, and Doorley's (2003) study, which indicated that implementing management practices that foster coalitions between individuals and public organisations would reinforce the policy's effectiveness. Additionally, the movement of the people's sector is consistent with the notion of a new social movement, which leverages the collaboration of the people's sector through the campaign actions of network partners and facilitates public engagement.

6. CONCLUSION

Electronic waste management in Thailand continues to be a challenge since there are no procedures in place to regulate it from the manufacturing process to the return of electrical and electronic items. The Hazardous Substances Act, B.E. 2535 (1992), and the Factory Act, B.E. 2535 (1992), are two significant pieces of Thai legislation that apply to electronic trash. Both statutes, however, are devoid of regulatory instruments to address the issue of e-waste. Thailand is now aware of this issue, and, consequently, several laws, such as the Waste Electrical and Electronic Equipment Management Bill, have been created. The perspectives of various parties indicate that this bill may offer benefits to all sectors as it establishes practical guidelines and effective measures for e-waste management; however, there are some concerns that need to be reconsidered prior to the Act's launch, such as determining the e-waste product type, insufficient law enforcement, a proper take-back system, raising public awareness, technologies related to waste management, and responsibility allocation. Many studies have proved the relationship between interest groups and e-waste management in Thailand; therefore, the following recommendations based on the findings were created to provide the good governance for all relevant parties.

The first priority approach is educating the public about the need for electronic waste management. For instance, educating citizens about the dangers of e-waste and the appropriate treatment of e-waste at the household level. If the majority of Thais recognise the threat posed by e-waste and understand how to handle it, this will generate public power that may counterbalance the influence of lobbyists. This also increases equality amongst all socioeconomic strata, therefore enhancing the transparency of policymaking. Next, equally and appropriately assigning responsibilities to each sector. Despite a poor e-waste management system and ineffectiveness of recent regulations, the local administrative sector is now the primary sector in charge of managing e-waste. If the task and responsibility are delegated to other relevant sectors with potential in e-waste management, the workflow of the local administrative sector will improve, resulting in more efficient operations. This also decreases the influence of interest groups who have a strong connection with a domestic administrator as the decision-making power is distributed to others.

This qualitative study's drawback is that the degree of the relationship between interest groups and e-waste management policy cannot be quantified; hence, the hypothesis may not be supported by sufficient evidence. In addition, an in-depth interview may be biassed due to the perspective of key informants and the conflicting interests of each group. To remove such bias in the future study, a larger sample size may be considered. The degree of preference attainment technique is one of the most suited methods for measuring influence in large populations since it can identify impact even if nothing observable occurs (Horváthová & Dobbins, 2019). In addition, participants are required to demonstrate that they have no conflicts of interest with policymakers.

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