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From External Drivers to Environmental Outcomes: Understanding the Behavioural Pathways of Environmental Performance in Electronic Enterprises

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Abstract:
This study investigates how institutional pressure, media persuasion, green finance, and government support influence environmental performance in Chinese electronics manufacturing firms through the mediating role of e-waste recycling behaviour. Using a SEM approach on data from 503 firms, results reveal that government support, institutional pressure, media persuasion and green finance significantly impact environmental performance through e-waste recycling behaviour. As a result, the research contributes to sustainability literature, as it develops the SCP (Structure-Conduct-Performance) model taking a behavioral perspective and in a critical market, such as an emerging one.
Keywords: *Environmental performance, Institutional Pressure, Media, Green Finance, Government*

1. INTRODUCTION

In recent years, environmental sustainability has risen to the forefront of industrial discourse, particularly within high-impact sectors such as electronics manufacturing. This industry grows rapidly but generates waste as well [1]. The biggest electronics producer, China, also produces the most e-waste. With almost 12 million tonnes of e-waste and 32% of the worldwide electronics sector, China leads India and the US in environmental regulation [2]. As a major player in electronics exports and imports, China is under significant scrutiny from environmental organisations due to its contribution to the rise of electronics waste. This suggests China needs to address its e-waste management, and accountability should be ensured from the producers themselves.

To counter the growing E-waste problem produced by big manufacturers, Extended Producer Responsibility (EPR) for the electronics players in the country has been enacted [3]. This has ensured that producers have more end-to-end responsibility for the management of e-waste. They are bound to comply with the collection and disposal of waste they generate [4]. Producers are tackling this issue by building and participating in organised recycling schemes. Recycling aims to meet an environmental performance standard. This recycling performance is a core metric under the broader category of environmental performance [5], which serves as a benchmark for evaluating a firm's adherence to sustainability goals.

Few studies have investigated the specific pathways through which environmental performance is achieved. Those studies that explored environmental performance are mostly related to regulatory influence, financial enablers, or reputational needs. For instance, some studies have examined regulatory pressure [6], whereas some researchers have studied media influence [7] as external factors affecting e-waste recycling. Similarly, financial mechanisms like government support [8, 9]and green finance [10, 11] as enablers of environmental performance. However, these studies often fall short of exploring how such external pressures interact with internal behavioural responses to produce measurable environmental outcomes.

This study seeks to explore a more complex and nuanced model by examining the intricate relationship between external sustainability drivers and internal behavioural responses, specifically e-waste recycling behaviour, and how this interaction ultimately translates into improved environmental performance. Existing research often treats these factors separately. Most of the studies are either based on one or two external drivers or behavioural intention. Very few have studied the entire path comprehensively. This study addresses that gap by investigating how various external sustainability drivers, namely institutional pressure, media persuasion, government support, and green finance, shape e-waste recycling behaviour in

Chinese electronic enterprises, and whether such behaviour leads to improved environmental performance. By doing so, it aims to bridge a critical gap in the literature and offer a more holistic understanding of sustainability outcomes in the context of Chinese electronic enterprises. Furthermore, research on Chinese electronics firms is scarce, with existing work either adopting Western-centric perspectives or focusing on macro-level policies. Western countries are no longer the producer of the most e-waste; still, past literatures are mostly focused on these due to their historical dominance in electronics consumption and regulatory development. The current Chinese contribution to e-waste is much larger; hence, the literature focus should be increased. This study addresses that gap by studying how external sustainability demands affect Chinese electronics industry behaviour and environmental performance. This study aims to investigate the correlated pathway between external sustainability drivers and internal behavioural practices. By doing so, the findings of this study will identify which external factors significantly influence these internal responses. Additionally, the study seeks to examine how these internal practices, in turn, impact environmental performance within Chinese electronics manufacturing firms.

2. LITERATURE REVIEW

2.1 Structure-Conduct-Performance (SCP) model

The Structure-Conduct-Performance (SCP) model serves as the theoretical foundation for this study. SCP model is an economic framework used to analyze how the structure of a market influences the behaviour (conduct) of firms, which in turn affects overall market outcomes (performance). Mason [12] and Bain [13] developed this model. This model highlights the relationship between market structure, firm strategies, and performance[14]. It provides a systematic approach to understanding how market dynamics can influence organizational behavior.

The SCP framework posits that the "structure" of an industry, including regulatory conditions, media dynamics, financial incentives, and institutional pressures, shapes firm "conduct," which in turn determines "performance" outcomes [14]. Structural forces include institutional pressure (Institutional pressure refers to the external forces, mainly environmental regulations and policy expectations, that compel organisations to adopt environmentally responsible practices), media persuasion(Media persuasion is the informal influence exerted by news, social media, and public discourse, shaping corporate environmental behaviour through reputational pressure, public scrutiny, and heightened visibility [15, 16]), government support (Government support refers to the financial and policy-based assistance provided by the state to promote industrial and social development), and green finance (Green finance is about supporting funds that can be received from the government or banks in the name of sustainable development). Each of these represents different market mechanisms that exert influence on electronics manufacturers in China. Institutional regulations and media persuasion are two major structural constraints that encourage recycling as a compliance mechanism. Government incentives and green finance function as enabling conditions. In general, these enablers are still external to the firm and shape market behaviour; therefore, they appropriately fall under the structural dimension of the SCP model. The conduct of a firm or its behaviour is primarily influenced by this. This conduct includes tangible actions such as establishing take-back systems, adopting eco-design, and engaging in formal recycling channels, which is E-waste recycling behaviour (E-waste recycling behaviour, rooted in environmental psychology, refers to the deliberate actions taken to manage electronic waste responsibly). Later adoption of such conduct helps a firm to change its environmental performance (Environmental performance comes within the organisational performance domain; however, it's not about how profitable a company is. Environmental performance is a sustainability-oriented measurement area). This study uses SCP as a theoretical underpinning through which interrelation among the external factors, internal behaviour, and performance can be identified and established.

2.2 Hypothesis Development and Conceptual Framework

Institutional pressure and e-waste recycling behaviour are linked in several studies. Regulatory and normative constraints strongly influenced an organisation's environmental management strategies [17]. Such environmental management practice has recycling initiatives as well. Institutional demands shape organisational responses by embedding sustainability goals into corporate strategy, particularly through e-waste collection and repurposing [6]. These findings suggest that institutional pressure not only motivates recycling behaviour but also accelerates firms' transition toward circular economy practices. Companies can transition towards a circular economic model from a classic linear model, hence expanding the

contribution to environmental performance [18]. Considering this, institutional pressure can directly affect both e-waste recycling behaviour and environmental performance. At the same time, behaviour and performance have interdependency too. This means institutional pressure indirectly influences environmental outcomes by increasing a company's behavioural intent.

Transitioning from institutional mechanisms to informal social influences, media persuasion represents another critical structural force impacting firms' recycling conduct and environmental outcomes. Unlike institutional pressure, which stems from formal regulatory forces, media persuasion influences organisations through informal but powerful public channels such as news coverage, social media, documentaries, and public discourse [19]. Media shapes public opinion on any issue, which is a critical determinant for any brand. Electronics brands are not immune to media either. Similarly, it acts as an instrument shaping corporate environmental behaviour by amplifying public awareness, altering consumer expectations, and putting reputational pressure on firms [20]. Present-day studies have focused on the new media domain and found that it significantly intensifies environmental pressure by amplifying institutional expectations and exposing unsustainable practices [21, 3]. Media coverage of environmental issues, especially e-waste mismanagement, drives consumer awareness towards this issue [22]. Media coverage, whether it is negative or positive, can drive firms to adopt actions to maintain their legitimacy. The media have been one of the major enablers of scrutiny and actions towards achieving environmental performance [23]. Negative coverage damages brand image and stakeholder relations, which is why Chinese electronics manufacturers are increasingly responsive to media scrutiny. To avoid such things, electronics brands consider media as a catalyst, encouraging them to implement authentic recycling behaviours aligned with sustainability goals. Furthermore, these behavioural responses, driven by media persuasion, can effectively contribute to improved environmental performance.

Building on these media-driven dynamics, the role of green finance emerges as a financial enabler influencing firm conduct and subsequent environmental outcomes. Green finance is the first financial mechanism that this study considers as an external factor affecting behaviour and performance. Green bonds and sustainability-linked loans are specifically designed to support environmentally sustainable activities [24]. Companies issuing green bonds helped in achieving sustainability [25]. While these studies focus on broad sustainability outcomes, it is important to recognise that e-waste recycling behaviour and environmental performance are critical components of corporate sustainability [26]. Previous studies have shown that banks and investors provide financial support to promote waste management and recycling practices [27, 11]. These are behavioural responses rather than the outcome. This means the majority of the studies have shown that green finance may trigger waste recycling behaviour. Although mention of environmental performance is scarce, still considering how behavioural changes lead to performance, it can be proposed that green finance contributes indirectly to environmental outcomes.

In addition to market-based financial incentives, direct government support represents another vital structural factor shaping firm behaviour and environmental performance. Government support is another external factor that this study considers as an influencing one. Electronics firms operating in China consider the Chinese government as a dominant actor that influences corporate behaviour [28]. Government subsidy policies have been playing a significant role in accelerating the adoption of green and sustainability practices [29]. The Chinese government has introduced financial incentives such as subsidies, tax reductions, low-interest loans, and credits to promote e-waste recycling [30, 31]. Government subsidies improve China's entire e-waste system's disposal capacity [32]. Subsidies also boost formal collector competitiveness, reducing the role of informal, unregulated actors [33]. These increases in e-waste disposal capacity or reduction of the role of informal waste management players suggest that manufacturing firms are taking responsibility into their own hands now, which also means their waste recycling practice has improved. Government support for electronics players is available, and these interventions have had a positive impact on formal recycling enterprises by making the process more economically viable.

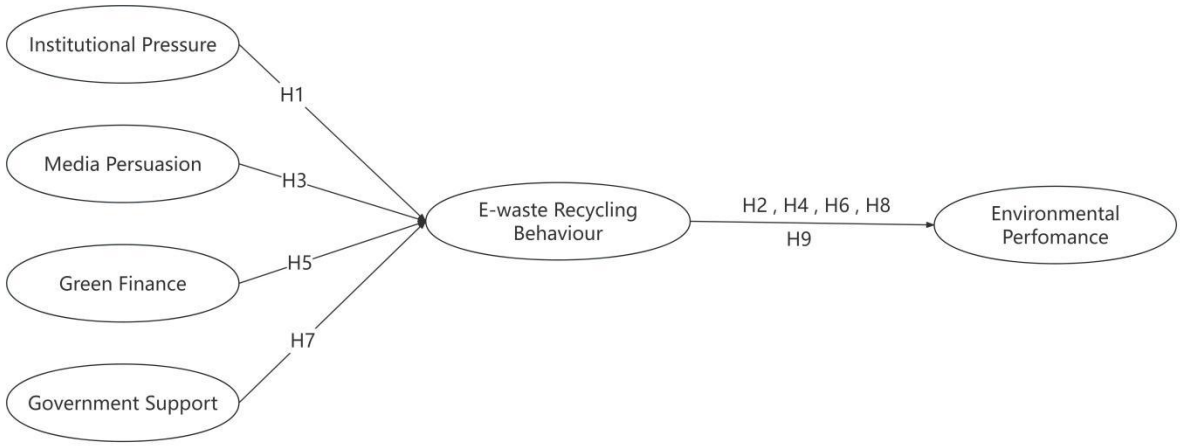
Across all these factors, one common thread is the assumed relationship between recycling behaviour and actual environmental performance outcomes. Behaviour and performance are usually correlated as they follow a linear path [34]. However, these studies are not explicitly on electronics firms' e-waste recycling behaviour. Still, considering how behaviour and performance have been interlinked in previous literature, it can be assumed that having higher and positive e-waste recycling behaviour should be translated into higher environmental performance for Chinese electronics firms.

The following hypotheses can be attributed to Table 1

Table 1: Hypothesis summary

Hypothesis	Statement
H1	Institutional pressure has a positive effect on e-waste recycling behaviour among Chinese electronics manufacturing firms.
H2	E-waste recycling behaviour acts as an explanatory mechanism through which institutional pressure influences environmental performance in Chinese electronics manufacturing firms.
H3	Media persuasion has a positive effect on e-waste recycling behaviour among Chinese electronics manufacturing firms.
H4	E-waste recycling behaviour acts as an explanatory mechanism through which media persuasion influences environmental performance in Chinese electronics manufacturing firms.
H5	Green finance has a positive effect on e-waste recycling behaviour among Chinese electronics manufacturing firms.
H6	E-waste recycling behaviour acts as an explanatory mechanism through which green finance influences environmental performance in Chinese electronics manufacturing firms.
H7	Government support has a positive effect on e-waste recycling behaviour among Chinese electronics manufacturing firms.
H8	E-waste recycling behaviour acts as an explanatory mechanism through which government support influences environmental performance in Chinese electronics manufacturing firms.
H9	E-waste recycling behaviour positively influences environmental performance in Chinese electronics firms.

Figure 1: Conceptual Framework



3. METHODOLOGY

A quantitative research method through the utilisation of a survey questionnaire is chosen as the primary data collection approach. A purposive sampling approach was chosen in terms of targeting the response. To have a sample that reflects the group of top-level managers with expertise in the fields of environmental and strategic decision-making, the use of non-probability sampling was considered. This purposive sampling allowed selection of certain individuals based on their pertinence to the requirements of the research, which is not randomly distributed throughout the population. The constructs were measured using reflective indicators on a seven-point Likert scale-based survey questionnaire. The First construct of this questionnaire was Institutional Pressure, consisting of 14 items taken from a study [6]. Media Persuasion(4items) [35] and Government Support (5 items) [36], and Green Finance (6 items) [37] are the thereanent constructs which can be found within this questionnaire. Finally, the mediating variable was E-waste Recycling Behaviour, with 3 items and taken from the same study [6]. The outcome variable, Environmental Performance, was assessed through 5 indicators [38]. Total number of items has been 37, which will be used to build the structural model.

Now, the analysis of this model will be based on structural equation modelling hence and studies have suggested using 10-times rules based on the number of items in a model. Based on the 10-times rule [39], with 37 measurement items, a minimum sample size of 370 was required. However, considering a 40% non-response rate, these 370 have been rounded up to 550 to get at least a minimum response rate. At the end of data collection, 503 valid responses were collected. Therefore, having 503 (>370) sample size seems quite reasonable for a study that wants to establish a structural model. The chosen method of analysis is path analysis using the structural equation model. SPSS AMOS was used to conduct Structural Equation Modelling (SEM), suitable for testing complex models with mediating effects and multiple latent variables.

4. RESULT

4.1 Descriptive Statistics

The frequency table 2 summarises demographic and professional characteristics of 503 respondents in the Chinese electronics manufacturing industry. Most participants were aged 25–34 (33.4%) and predominantly male (60.8%). A large portion held a bachelor's degree (42.9%) and occupied roles like operations and production managers. The majority had over 4 years of experience, indicating a well-informed respondent base.

Table 2: Descriptive statistics of variables

Question	Response Option	Frequency (n)	Percentage (%)
1. Age Group	Under 25	72	14.3%
	25–35	168	33.4%
	35–45	132	26.2%
	45–55	81	16.1%
	55 and above	50	9.9%
2. Gender	Male	306	60.8%
	Female	176	35.0%
	Prefer not to say	12	2.4%
	Other	9	1.8%
3. Education Level	High school or below	32	6.4%
	Diploma/Technical	102	20.3%
	Bachelor's	216	42.9%
	Master's	120	23.9%
	Doctorate	21	4.2%
	Other	12	2.4%
5. Job Position	Operations Manager	144	28.6%
	Production Manager	121	24.1%
	Project Manager	103	20.5%
	Logistics Manager	91	18.1%
	Other	44	8.7%
6. Years in the Electronics Industry	Less than 1 year	38	7.6%
	1–3 years	96	19.1%
	3–6 years	134	26.6%
	6–10 years	121	24.1%
	More than 10 years	114	22.7%

4.2 Construct Validity and Reliability Assessment

The above Table 3 suggests the confirmatory factor analysis and the obtained strong construct validity and reliability. The result shows that the majority of the loading has exceeded 0.70, which is good for higher reliability. The composite reliability above 0.70 and AVE over 0.50 in most cases suggest that the model should have adequate internal consistency and convergent validity.

Table 3: Confirmatory Factor Loading Standardised Estimation, Validity and Reliability

Variable	Dimension	Item	Factor Loading	AVE	CR
Institutional Pressure	Mimetic pressure	MPR1	0.520	0.372	0.892
		MPR2	0.622		
		MPR3	0.525		
		MPR4	0.583		
	Coercive pressure	CP1	0.684		
		CP2	0.706		
		CP3	0.660		
		CP4	0.660		
		CP5	0.686		
	Social pressure	SP1	0.522		
		SP2	0.586		
		SP3	0.569		
		SP4	0.574		
		SP5	0.601		
Media Persuasion	Single dimension	MP1	0.768	0.572	0.842
		MP2	0.669		
		MP3	0.806		
		MP4	0.774		
Government Support	Single dimension	GS1	0.690	0.522	0.845
		GS2	0.722		
		GS3	0.707		
		GS4	0.777		
		GS5	0.712		
Green Finance	Single dimension	GF1	0.775	0.580	0.892
		GF2	0.759		
		GF3	0.811		
		GF4	0.740		
		GF5	0.734		
		GF6	0.749		
E-Waste Recycling Behaviour	Single dimension	EWRB13	0.814	0.616	0.828
		EWRB22	0.799		
		EWRB31	0.739		
Environmental Performance	Single dimension	EP1	0.743	0.554	0.861
		EP2	0.786		
		EP3	0.710		
		EP4	0.750		
		EP5	0.730		

4.3 Square root of AVE and Inter-Construct Correlations

The above Table 4 suggests the Fornell-Larcker matrix or discriminant validity among the four constructs. Institutional Pressure (√AVE = 0.610), Media Persuasion (√AVE = 0.756), Government Support (√AVE = 0.722), and Green Finance (√AVE = 0.761) all have acquired a square root of AVE greater than 0.5. Correlations between constructs are all lower than their respective √AVE values, including IP–MP (0.107), IP–GS (0.268), MP–GS (0.192), IP–GF (0.199), MP–GF (0.104), and GS–GF (0.144). Also, E-Waste Recycling Behaviour (0.785) and Environmental Performance (0.744) show good discriminant validity. Their inter-construct correlations are all below the respective 2sqrt AVE values, and they include EWRB-IP (0.436), EWRB-MP (0.270), EWRB-GS (0.432), EWRB-GF (0.410), EP-EWRB (0.669), EP-IP (0.295), EP-MP (0.083), EP-GS (0.293), and EP-GF (0.278). Therefore, the results also support the discriminant validity of all 6 constructs as they all showed uniqueness empirically in their latent variables. This table

suggests that the distinctiveness of the constructs and confirms that each measures a separate concept within the structural model.

Table 4: Square root of AVE and Inter-Construct Correlations

Constructs	IP	MP	GS	GF	EWRB	EP
Institutional Pressure (IP)	**0.610**					
Media Persuasion (MP)	0.107	**0.756**				
Government Support (GS)	0.268	0.192	**0.722**			
Green Finance (GF)	0.199	0.104	0.144	**0.761**		
E-Waste Recycling Behaviour (EWRB)	0.436	0.270	0.432	0.410	**0.785**	
Environmental Performance (EP)	0.295	0.083	0.293	0.278	0.669	**0.744**

4.4 Structural Model analysis

The structural model fit indices obtained were $\chi^2/df = 1.253$, TLI = 0.982, CFI = 0.983, NFI = 0.923, GFI = 0.924, AGFI = 0.914, RMSEA = 0.022, and RMR = 0.078, indicating a satisfactory model fit. The proposed model demonstrates adequate explanatory power for the loyalty construct.

The current study identified a significant direct effect of institutional pressure on e-waste recycling behaviour ($\beta = 0.370$, Std. Est. = 0.436, $p < 0.01$), confirming H1. Media persuasion had a significant impact on e-waste recycling behaviour ($\beta = 0.220$, Std. Est. = 0.270, $p < 0.01$), therefore supporting H3. Green finance significantly influenced recycling behaviour ($\beta = 0.384$, Std. Est. = 0.410, $p < 0.001$) supporting H5. Government support had a strong effect on e-waste recycling behaviour ($\beta = 0.366$, Std. Est. = 0.432, $p < 0.01$) confirming H7. Finally, the direct effect of e-waste recycling behaviour on environmental performance was found to be highly significant ($\beta = 0.610$, Std. Est. = 0.669, $p < 0.01$), thereby supporting H9. The results confirm the SCP framework and are summarized in Table 5.

Table 5: Structural Model results summary for direct and indirect relations

Hypothesis	Pathway	Est. (β)	Std. Est.	P-value
H1	Institutional Pressure → E-Waste Recycling Behaviour	0.370	0.436	**
H3	Media Persuasion → E-Waste Recycling Behaviour	0.220	0.270	**
H5	Green Finance → E-Waste Recycling Behaviour	0.384	0.410	**
H7	Government Support → E-Waste Recycling Behaviour	0.366	0.432	**
H9	E-Waste Recycling Behaviour → Environmental Performance	0.610	0.669	**

Note: ** $p<0.01$ indicates that the coefficient is statistically significant at the 1% significance level.

4.5 Mediation Effects

This section assesses the mediating effect of E-Waste Recycling Behaviour in the relationships between Institutional Pressure, Media Persuasion, Government Support, and Green Finance and the outcome variable Environmental Performance. For Institutional Pressure, the indirect effect via E-Waste Recycling Behaviour is significant ($\beta = 0.068$, $p = 0.002$, 95% CI [0.028, 0.114]), confirming H2. For Media Persuasion, E-waste recycling behaviour mediates the effect on Environmental performance ($\beta = 0.063$, $p = 0.005$, 95% CI [0.021, 0.108]), supporting H4. For Government Support, the mediation effect through E-waste recycling behaviour is statistically significant ($\beta = 0.059$, $p = 0.004$, 95% CI [0.024, 0.101]), supporting H6. Finally, Green Finance shows a significant indirect effect on Environmental performance through E-waste recycling behaviour ($\beta = 0.067$, $p = 0.001$, 95% CI [0.030, 0.112]), supporting H8. These results demonstrate that E-waste recycling behaviour is not only an outcome of strategic and external drivers but also a crucial mechanism through which environmental performance improvements are realized.

Table 6: Bootstrap Analysis of Mediating Effect Significance Test

Hypothesis	Model Path	Indirect effect coefficient	P-value	Boot LLCI	Boot ULCI	Test result

H2	Institutional Pressure → E-Waste Recycling Behaviour → Environmental Performance	0.068	=0.002**	0.028	0.114	Supported
H4	Media Persuasion → E-Waste Recycling Behaviour → Environmental Performance	0.063	=0.005**	0.021	0.108	Supported
H6	Green Finance → E-Waste Recycling Behaviour → Environmental Performance	0.059	=0.004**	0.024	0.101	Supported
H8	Government Support → E-Waste Recycling Behaviour → Environmental Performance	0.067	=0.001***	0.03	0.112	Supported

Note: *P < 0.05, **P < 0.01, ***P ≤ 0.001.

5. CONCLUSION AND DISCUSSION

The government persuasion seems to be the most influential external factor. The result suggested that this structural factor has the highest effect size on the changes of e-waste recycling behaviour. This means that incentives and supports are crucial in shaping firm conduct (behaviour). This is supportive of studies like [30], [31] and [8], as they also stated that government supports and incentives have improved e-waste recycling behaviour. Although these studies were not associated with electronics industry manufacturers, that means this current study extends their findings. Having a supportive government which provides incentives and subsidies looks like the most effective when it comes to changing electronics firms' behaviour. In terms of whether government support influences environmental performance, the result indicated that a change of e-waste recycling behaviour would surely be translated into environmental performance. Electronics companies are huge, and their needs for e-waste management facilities are also large. It is evident that when they perceive that the government is at least supportive, they are more likely to engage in waste management behaviour. This behaviour results in higher environmental performance. Similar to what institutional theory suggested, regulatory pressure is indeed an important external structural factor that influences both e-waste recycling behaviour and environmental performance. Although this study has found a positive and significant effect of institutional pressure, it is still not the most effective when it comes to change in e-waste recycling behaviour or environmental performance. Now, e-waste management is initiated as a voluntary social campaign and responsibility. Later, this management behaviour transformed into a mass movement due to a mandatory compliance-driven agenda. The reason behind this is because increasing awareness of environmental regulations. As in the recent articles, such as [6] and [40], the pressure of regulators in companies to adopt circular economy practices is high. Other studies also indicate that e-waste recycling is actually a mediating means, whereby regulatory pressure is changed to tangible environmental gains. In general, this study confirms that one behavioural pathway to performance is the institutional framework.

Green finance emerged as the third most effective factor, which is directly or indirectly influencing behaviour and performance. Besides that, green finance such as green loans and investments linked to sustainability. Similarly, green loans, as well as eco-innovation subsidies, are being directly associated with firm behaviour [37]. Similar studies [41] have mentioned that green finance removes the burdens of cost for raising funds for a company and improves environmental performance. Hence, the findings obtained from this study resonate with past research. Green finance indeed has a positive effect on behaviour and performance of electronics firms. This means electronics firms, if they get enough green finance opportunities, will most likely change their behaviour towards e-waste recycling. The significance of green

finance lies in its capacity to reduce financial barriers to adopting green technologies and practices. Therefore, having green financing opportunities only promotes immediate engagement with recycling behaviour, but it also enables long-term environmental improvements. Similar to what structural factors do to a conductor. Green finance will also change the behaviour, which will further replicate with environmental performance.

Media is the least influential external structural element, which ensures e-waste recycling behaviour is observed among Chinese electronics firms. Media being the least impactful can be attributed to its lack of enforcement power. The effect of media is not so potent since it cannot be enforced. Instead, it acts via reputational and normative means.. Media house cannot structurally force an organisation to maintain certain policy around waste management. However, media still does this through reputational leverage. Media coverage is all about reputation and exerting social pressure [42]. The findings support the current literature on new media as well. It aligns findings with [21] and [3] studies. Especially in electronics firms, where consumer trust is vital, media persuasion drives environmental compliance through non-coercive yet highly impactful reputational influence. In addition, the novel aspect of this finding is that the media persuades firms towards changing their behavioural attitude towards e-waste. The conduct of electronics firms gets influenced and changed under media pressure, thus increasing their environmental performance. This underscores the media's evolving role from mere information dissemination to a powerful behavioural catalyst, shaping corporate sustainability actions through visibility, accountability, and reputational stakes.

The aim was to understand the behavioural path around environmental performance achievement for Chinese electronics companies. The result showed that government support, institutional pressure, Media persuasion, and green finance all 4 have direct and indirect associations with behavioural path. It can be said that having government support will be the first that can However, one needs to change the behaviour first, and later expect performance. Structural drivers like these four will first change the firm behaviour, which in turn produces performance outcomes.

6. Recommendation

Thus, the study extends the Structure-Conduct-Performance framework by incorporating a behavioural lens, emphasising that structural forces do not influence performance directly in isolation, but often through firm-level behavioural adaptations such as e-waste recycling practices. This behavioral route is essential for policymakers, investors, and regulators aiming to promote sustainability in the electronics sector through targeted interventions. The first strategy would be to consider how to change current behaviour to e-waste recycling behaviour. As in all cases, e-waste recycling behaviour showed major explanatory mechanisms linking structural forces to environmental performance. This suggests that behavioural transformation is the bridge between external pressures or incentives and tangible sustainability outcomes. Thus, any structural intervention must prioritise fostering this behavioural shift to be truly effective. In conclusion, all the external structural factors can indeed increase environmental performance. However, changing e-waste behaviour first. Policymakers, investors, and industry leaders must remember that structural interventions must modify organisational behaviour as well as impose rules or give incentives. The electronics industry must prioritise this behavioural pathway for long-term environmental performance. Thus, the study adds a behavioural lens to the structure-conduct-performance framework for environmental sustainability. Future policies should focus on fostering e-waste recycling behaviour as a strategic lever for improving environmental performance. Interventions should combine regulatory, financial, and media-based pressures with organisational training and capacity-building programs to reinforce behavioural change. Encouraging inter-firm collaboration and knowledge sharing could further accelerate sustainability transitions in the electronics sector.

Despite finding a comprehensive outlook, there are some limitation that needs to be addressed. This study is limited to Chinese electronics manufacturing firms, which may constrain the generalizability of findings across other sectors or national contexts. It adopts a cross-sectional design, preventing causal inference over time. Additionally, behavioural constructs were self-reported, which may introduce bias. Future research could explore longitudinal designs to track behavioural change and performance outcomes over time. Comparative studies across countries or industries could validate the behavioural mediation model. Further, integrating qualitative insights from managers could enrich understanding of how structural pressures are perceived and acted upon within firms, offering a more granular view of sustainability transformation processes.

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