Studying the effect of institutional pressures on managers intentions of Small enterprise in Thi-Qar province to adopt environmental disposal of electronic waste

Prof.Abdul Aladheem Driafish Jabbar Alziady

College of Administration and Economics/The University of Thi –Qar

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Absract:

Increasing amounts of electronic waste(e-wastes) which is generated by Small enterprises (SEs) in Thi-Qar provenance posen egative effects on the environment through improper recycling and disposal techniques. Consequently, the pressures on these enterprises have been escalating. Therefore, this research studies how institutional pressures affect the adoption of environmental disposal of E-waste across them. A research model has been developed to link three components: coercive pressure, normative influence, and mimicry, then exam their effect on adopting environmental disposal of E-waste. The model was validated using data collected from a field survey of (101) managers of small enterprises in Thi-Qar province. A questionnaire was developed to collect data. It contains five major variables, exemplifying by twenty-one items. Also, five dimensions' scalar is used for the purpose of measuring, subjected to reliability and validity tests. The partial least square(PLS) method was employed to analyze the survey answers. The results show that normative, mimetic and coercive pressures significantly drive environmental disposal of e-waste adoption respectively.The analysis that normative pressure is the most influential in the attitude towered adoption environmental disposal of e-waste, while the coercive pressures have had the most significant effect on the continuance of usage of the-waste practice. This research contributes to existing knowledge in the field of IT, regarding the decision maker's intention for the adoption and continued use of e-waste through the development of a theoretical framework that identifies the key factors for the adoption environmental disposal of electronic waste.

Keywords: Institutional pressures;environmental disposal of e-waste

1- Introduction

The continuous increase in volumes of electronic waste(e-waste)that are discarded and coupled with the inadequacy of environmental disposal E-waste practices at SEs level in Thi-Qar province, which is located in the south of Iraq. E-waste is attracting attention from numerous stakeholders including policymakers, media, and scholars. Accordingly, identifying which forces motivate SE managers to adopt environmental disposal of E-waste which becomes crucial, especially in cities such as Thi-Qar that are recorded increases in the generation of e-waste and mounting pressures on the environment.

The number of electronic devices in useby SEs has been increasing exponentially during the last decade, and newer, more powerful devices continue to substitute older versions. This has led to a very short useful lifetime of the devices, leaving behind a large amount of obsolete device.When, typically, unwanted electronic devices throw away as (E-waste), they will then end up in landfills and cause environmental concerns and negative effects on the public health (Ikhlayel,2018).E-waste generally contains hazardous components, which could lead to environmental degradationif recycled improperly (Dais et al.,2018).Also, it is a source of valuable metals such as iron, copper, aluminum, gold, silver and other metals. E-waste, thus, is a rich stream of essentialraw materials and it is imperative to recover those materials to realize resource efficiency (Borthakur and Govin,201^).For this reason, managers of SE are facing the pressures to take the concept of environmental disposal of e-waste into account. Recently, their awareness has grown that issues of e-waste should be addressed. Therefore, environmental disposal of e-waste involves reuse, remanufacturing, recycling and, in some cases, incineration or landfilling (Echegarary and Hansstein,2017) have emerged as an important new approach for these enterprises as a way for environmental compliance. This

phenomenon implies that managers of SE are now starting to recognize that environmental awareness can be a source of balancing economic, social and environmental performance.

Due to the risks associated with e-waste, namely environmental pollution and negative consequences for individual health,the dangerous escalation of e-waste at Thi-Qar province raises a question of whether the attitude of the SE managers toward environmental disposal of E-waste, or intentions to adopt, suitable e-waste practices and disposal methods are modeled. Hence, it is rational to think that the level of attitude these managers about the hazardous nature of the e-waste generated by their enterprises will relate to their intention to adopt environmental disposal E-waste(Ikhlayel,2018).Unfortunately, there has been very limited research in Iraq on such alarming issue. Also, there is a lack knowledge regarding the amount of E-waste discarded and a lot of research is needed regarding environmental impacts of institutional pressures, which shape managers' attitude towards environmental disposal of e-waste practice and their intentions to adoptit. Therefore, the purpose of this research is to know, explore and understand such important issues related to E-waste.

The paper is structured as follows: after the introduction, we outline the problem of study and its objectives, then the theoretical background, followed by a section devoted to the methodology of the study, and finally we present results, discussion, and conclusions.

1-1 Problem statement

Following the economic boom after 2003, due to cheaper rate and increase in the purchasing capacity of SE, there was a big escalation for the electronic devices using, such as computers, laptops, TVs, DVD players, printers, copy machines, and mobile phones .In parallel, the E-waste unprecedentedly is Increasing. Besides,an inappropriate disposal processing (e.g., disposal with municipal solid waste and open burning) of e-waste makes serious environmental contamination. Such informal recycling

practices are common in our city, where recycling methods are basic, and a significant proportion of e-waste components ends up in an unrestrained landfill and open dump places. Consequently, managers of the SE at Thi-Qar seems to realize the rigorous problem of E-waste. In recent years, positive attitude towards adoption environmental disposal of e-waste and intentions to adopt have manifested. In this context, literature has demonstrated that institutional pressures, including coercive pressure, normative influence, and mimicry can influence the rate at which environmental practice is being adopted and diffused among managers of these firms (Lin and Ho,2016). Based on this opinion, this research investigates the influence of Institutional pressures on the attitude and intentions, which to adoptE-waste management. The main research questions the paper addresses are:

(1) Do the institutional pressures influence of the intention managers of SEsto adopt environmental disposal of E-waste practices?

(2) Is the adoption of E-waste practices affected by the same Institutional powers?(3)What is the role of attitude as a mediating variable?

1-2 Study objectives

In the light of the problem mentioned, the major objectives of this paper are:

1-Exploring the influence of institutional pressures on the adopted managers of the SEs environmental disposal of E-waste.

2-Diagnosing the role of attitude toward environmental disposal of E-waste as a variable mediating the relationship between Institutional pressures and intention to adopt environmental disposal of E-waste practices.

3-Illustraing relationships of the correlation and the effect among the variables of research according to what is stated in the research model.

2-Literature review

E-waste is all types of electrical and electronic equipment (EEE) and its part that has been discarded by the owner as waste without a plan of re-use (Kumar and Kannegala,2016).In the same vein (Dias et al.,2018) stated that E-wasteis all types of discarded electric and electronic equipment without the tendency of reuse. In our study, we focused on the electronic device.It is particularly interesting because it contains both hazardous and valuable materials, which makes its recycling environmentally and economically meaningful (Zhang and Xu, 2016). Because it contains hazardous materials like lead,cadmium, mercury, he xavalent chromium, poly brominates biphenyls, poly brominates dip henyl ethers, arsenic and polyvinyl chloride, it is important to reduce, if not eliminate, these materials by the disposal of E-waste appropriately (Kumar and Kannegala,2016). The disposal of these chemicals/metals in landfills or by burning yield harmful effects on the environment and humans and other living thingscan be exposed to these chemicals through water, air, soil, dust, or food (Ikhlayel :2018).These materials are a risk for human health and for the environment, as they may landfall polluting water and soil (Dias, 2015).According to studies(Dias et al:201٦; Kumar et al,2017) e-waste usually contains valuable and critical materials such as gold, palladium, silver, indium and rare earth, which strengthen the benefit of recycling.

As long as the average of the lifespan of electronic products is getting shorter and shorter, which in turn forces obsoleted technologies to be disposed of in the waste stream, E-waste is emerging as one of the fasters growing challenges (Molla and Abaresh,2012). Moreover, existing studies have discovered that e-waste is a dangerous problem, and will become more serious in the future. According to Zhang et al., suggestion in 2011, e-waste problem that is caused by the massive use of IT equipment also may result in tremendous environmental crisis. About 500 million PCs reached the end of their service lives between (1994) and (2003). Five hundred million PCs contained approximately

(2872,000) t of plastics, (718,000) t of lead, (1363) t of cadmium and (287) t of mercury that poses environmental and public health issues if disposed of without proper treatment. Nishantet al.,(2017) reported that e-waste will be more serious in the future and the fastest growing waste stream (about 4 percent growth a year). It has been estimated that About 40 million tones [metric tons] of e-waste is created each year. In (2014), the amount of e-waste generated reached 41.8 million tons with most of the waste being generated in Asia, America and Europe respectively (Dais et al.,2018:8). The total amount of e-waste is expected to reach 50 million tons by (2018) and rising from 3% to 5% each year (Cucchiella et al: 2015:264). The highest waste generation per person was observed in Europe, followed by Oceania (Dias et al.,2018:9).

Each year, the developed countries create more e-waste than developing countries. Nevertheless, the negative effect of e-waste is more complicated in developing countries. Since the cost of recycling e-waste in developed countries is ten times higher than in developing countries, the former export e-waste to those countries. This is a point of debate and controversy. Opponents of exporting e-waste to developing countries claim that it is a business. Some people feel that it is unfair. Furthermore, because the people there don't have enough experience and appropriate equipment, they burn or landfill e-waste which makes the problem aggravate. Over recent decades, IT manufacturers have been experiencing various pressures from a variety of stockholders which required them to make their products environmentally friendly. So, they have been working to use raw materials which are not harmful to the environment (Echegaray and Hansstin,2017). In spite of the fact that they invest huge money in order to reach their goal, the problem is getting worse. Till now, many countries in the Middle East have not taken any steps toward facing environmental issues. A lot of ideas have recently been adopted information technology. For this reason, we need to think about e-waste. However, some

people feel that there are more urgent issues. As a result, our society is still facing a serious challenge resulting from the e-waste. It may be true that the governments have deferred plans to deal with this problem. When the computer stops working there, the owner either throws out as it wastes or keeps it at home. In both cases, there are serious dangers to public health. Today, SEsare under pressures from customers, competitors, regulators, and society to implement GIT practices (Coffy et al.,2013).

Since SEs have raised their investment in information technology (IT) during the last years, they are the main source of e-waste. Although the mounting e-waste from SE is beginning to reach disastrous proportions rapidly, managers of these enterprises have ignored the negative effect of e-waste on the environment for a long time. Unfortunately, Thi-Qar province does not have statistics on e-waste, but one can see thousands of computers, photocopiers, printers and unused faxes are left on the shelves or even on the streets. Generally speaking, in Thi-Qar most of the operations related to E-waste management such as collections, segregation, dismantling, and disposals are performed by people who collecting garbage. In absence of the adequate technologies and equipment, most of the techniques used for the treatments of E-waste are dangerous. Improper disposal operations found in different municipalities of Thi-Qar often involve the open burning of plastic waste, exposure to toxic solders, dumping of acids, and widespread general dumping.

To address the research questions, a survey questionnaire was developed to gain a better understanding of the institution's pressures which encourage SE managers to adopt environmental disposed of E-waste practices. The total sample size was 220 participating organizations, which were from different sectors, including building and construction, financial services, information technology services, publishing, entertainment, trade, education, and tourism. We obtained contact information for individuals identified as managers of SE from Thi-Qar tax department of Chamber of Commerce AL-Nasiriya city. Request

for participation in the study and instructions for completing the survey was sent via e-mail to the manager of the SE in the targeted sample pool. These participants were selected because prior research confirmed that managers have knowledge of adoption motives (Krell,2016). In additional, Akman and Mishra (2015) showed that the behavior of different groups in a society with different socio-demographic characteristics may show totally different patterns.

3-Conceptual framework and hypotheses development

The role of institutional pressures in the adoption of E-waste management systems has been extensively discussed in the literature, mainly in terms of the external pressures that drive firms to implement voluntary environmental strategies and to go beyond the performance levels required by environmental law(Daddi,2017). In this context, SEsare under increasing pressures from customers, shareholders and proposed legislative changes to improve their environmental performance. In a similar vein, the environmental impact of E-waste has started being discussed by academia, media, researchers, and government. To meet the challenges, managers these organizations are expected to play significant roles that can influence the rate at which environment disposed of E-waste diffuse into their enterprises and eventually adopt pro-environment behavior through organizations widely pursuing environmental sustainability. Their decision to adopt an environment disposed of E-waste is probably grounded in a mix of pragmatic and idealist considerations, as well as the legal ramifications (Chen et al.,2011). The researchers stress the difficulty of defeating the negative impact of IT in a decisive battle, so the seed of coordination has blossomed to defeata damage caused by IT from the cradle to the grave. Consequently, the attitude as well as Intentions to adopt which represents the reason for initiating an environment disposed of E-waste become appoints to debate.

Institutional perspective, which is widely used in recent years to examine the justifications for the adoption of environmentally disposed of E-waste, has traditionally focused on how organizations acquire institutional accepted by complying with social expectations and dominant practices within the organizational field (DiMaggio and Powell, 1983).Based on this view, values, and practices of environment disposed of E-waste penetrates into organizations in the process of institutionalization, which results in the convergence of organizational practices and responses (Oliver, 1991). Accordingly, Institutional perspective proposed these organizations are seeking a balanced approach to economic growth, which avoids the devastation of ours that will be accepted by institutions in the firm's environment (Yang,2017). In this part of the paper, I develop research model derived from the institutional perspective that focuses on coercive pressure, normative influence and mimicry as institutional pressures shape adoption environment disposed of E-waste. In another way, we draw the pressures as motives of organizations of adopting an environment disposed of E-waste. Institutional perspective explains how drives which are molded as the independent variables in the research model would the swift organizational attitude of ES managers, which in turn may influence the success of that behavior (Krell et al.,2016). Drawing on our literature review, we have developed a research model to explicate the key determinants of environmental disposed of E-waste adoption. In this research, we examine three types of the institutional pressures to draw a holistic view. In our model Institutional pressures are considered to be independent variables that influence on manager's attitude toward environmentally disposed of E-waste. The independent and mediating variables in turn influence adoption of environmental disposed of E-waste.Our research model and constructs are shown in Fig. 1.

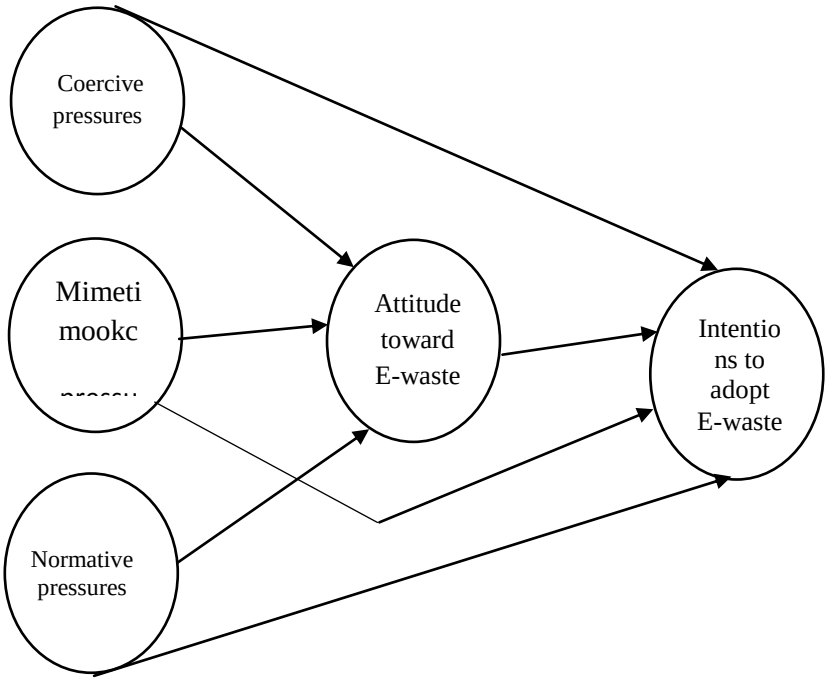

Fig. 1. Research model

We present the details of the three pressures in the following section.

3-1Coercive pressures

SEsare Surrounded by institutions that impose on them, directly or indirectly, engagein environmental disposed of E-waste. Otherwise, they would be Subjected to sanction. Coercive pressures, which Institutional theory defines as, the pressures that stem from institutions in a firm's environment which directly formulate rules that a firm need to comply with one of them. Based on the previous definition, institutions should be powerful enough to directly reward compliance or sanction noncompliance (DiMaggio and Powell, 1983). In our case, these institutions that include likely resource dominant traders, customers, federal, and local agencies use their power to force SE to involve in GIT practices, which, in turn, can directly impose constraints on

them. According to (DiMaggio and Powell:1983) coercive pressures mainly stems from the resource dependence perspective. Pfeffer and Salancik (1978) also support this view by stating that principal actors who have control over certain scarce resources may demand other organizations that are dependent on them adopt certain structures which serve their own interests. These resources dependent organizations often comply with such demands in order to secure their own survival. This pressures also stems from political influence and the need for legitimacy (Yang,2017). Recently the government either, federal or local, have started making policies and regulations that play a significant role in forcing SE to comply with the demands of environmental protection. These enterprises, in turn, may be getting benefits and avoid sanctions by responding to these demands. When are source-dominant organization, government agencies, and others perceive that small business practices aren't going along with the societal good, shaping positive attitude and adopting environmental disposed of E-waste may be imposed on them. Consequently, the stronger a small business depends on organizations in the environment, and the fewer possibilities the firm has to avoid negative sanctions, the stronger the coercive pressure, and the more will a firm be motivated to continue to adopt of environmental disposed of E-waste. Institutional researchers have shown that coercive pressure, such as regulations are vital to creating an environmental permit to adoption behavior (Daddi,2016; Lin and Ho,2016). Many studies have recommended that coercive pressures are an important predictor of GIT adoption (Yang,2017;Daddi,2016:Vejvar et al.,2017).

Hence, we propose the following hypothesis:

H1: Coercive pressures will be positively related to manager's attitude toward environmental disposed of E-waste.

H2: Coercive pressures will be positively related to manager's intentions to adopt environmental disposed of E-waste.

3-2Mimetic pressures

SEs are enthused to adopt a given practice either because of the favorable results achieved by other adopters in the same context, or the popularity of a practice. SE also mimic the behaviors of other organizations with whom they share important features. Mimetic isomorphism suggests that organizations will follow leading organizations, which have gained benefits from being the first movers in the industry(Deng and Shaobo:2015). This description applies to the adoption of environmental disposed of E-waste practice. After recognizing that other organizations in the environment have begun the practice of environmental disposed of E-waste and reap certain benefits, an organization attempts to undertake a similar step a move which is called mimetic pressure. When a practice has been adopted by a growing number of organizations, it becomes increasingly taken-for-granted so that some organizations may adopt such practice without thinking(March,1981). It is defined as the pressures that stem from behavioral uncertainty on how to solve a specific problem, perform a specific activity, or reach a specific goal (Krell et al.,2016). These kinds of pressures that is likely to arise when conditions are uncertain, making organization imitate actions of other organizations. It was claimed that organizations tend to imitate the structurally equivalent organizations which are perceived to be successful (Coffey et al.,2013). Moreover, in order to avoid appearing different from manyother organizations, they tried to join the institutional bandwagon (DiMaggio and Powell.,1983).It does not preclude the need for the organization to obtain legitimacy in the social structure to keep up with other organizations. krell et al. (2016) indicated that when the organizations have insufficient information to solve a problem, they observe that other organizations in the environment have successfully solved similar problems. Pieces of evidence of important mimetic pressures are showed in Chen et al (2011) study and was shown in (Coffy et al., 2013) studies. The above discussion leads us to the following hypothesis:

H3: Mimetic pressures will be positively related to manager's attitude toward environmental disposed of E-waste.
H4: Mimetic pressures will be positively related to manager's intentions to adopt environmental disposed of E-waste.

3-3Normative pressures

Normative pressures are associated with professionalization, and it shapes organizational response(Deng and Ji,2015). This is clearly seen when most decision makers worldwide are now talking about the negative impact of IT and making a greater effort to reduce it. The normative pressures are manifested through dyadic inter-organizational channels of firm supplier and firm-customer relationships which enables organizations to learn about innovations along with their associated benefits and costs (Burt 1987). Much of this type of pressures are a result of increasing professionalization. This stems from concern about the level of education and the professional training that organizations received. (Vejvar et al.,2017). When environmental operation becomes the norm, environmental disposed of E-waste practices, as one big environmental step, would be adopted by organization facing great normative pressures which resulted from frequent contact with other suppliers, customers, or trade organizations (Deng and Ji.,2015). Normative pressures are defined as pressures that steamed from norms specified by institutions such as professional or industry associations (Krell et al:2016).

As such, more and more normative signals are emerging. Essentially, these types of pressures are different from coercive pressures insofar as institutions that exert normative pressures have no authority to directly enforce compliance and do not penalize noncompliance (Chen et al.,2011) Thus, normative pressures do not affect firms through coercion; rather, firms comply with norms because decision makers identify themselves with particular industrial and professional institutions (Deng and Butler.,2015). As a result, the decision makers believe that compliance with norms specified by the professional and

industry institutions may be beneficial for their firm. Small business complies with environmental disposed of E-waste practices because key decision makers believe that compliance helps firms attract additional customers and to show they're interested in protecting our environment. Several previous studies have identified normative pressures as a predictor of GIT practices adoption (Lei and Ngaf.,2012; Kuo.,2010).

Based on the discussion above, the following hypothesis is proposed:

H5: Normative pressures will be positively related to manager's attitude toward environmental disposed of E-waste.

H6: Normative pressures will be positively related to manager's intentions to adopt environmental disposed of E-waste.

3-4Attitude toward E-waste

Many academics and researchers suggest that attitudes toward environmental disposal of E-waste is an important determinant of acceptance and integrated it into the firm practices. As attitude determines how people perceive E-waste, feel about them, and behave, there has been significant attention paid to understand it. The advancement of new technologies in the twenty-first century and the resultant increase almost necessitates the use of environmental disposal of E-waste. At the same time, the core actors in SE smust be prepared for this inevitable development. This has brought to the front SEs manager attitudes to the environmental disposal of E-waste as determinants of the acceptance and adoption environmental disposal of E-waste for environment protects purposes. Allport (1935) defined attitude asA mental and neural state of readiness, which exerts a directing, influence upon the individual's response to all objects and situations with which it is related. Attitude toward the behavior means a person's judgment about behavior position: if it is good or bad if he is in favor or against performing the behavior (Ajzen and Fischbein, 2005). Schwartz (1992) suggests that attitude is sets of beliefs about a certain object or an act which may convert into an intention to fulfill the act. The attitude

toward the behavior and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in demand(Wang et al:2016). The attitude in our study mentions to managers' environmental perception of damage to e-waste and attitudes towards environmental disposal of it.

Attitudes toward environmental issues are concretein a person's concept of self and the degree to which an individual observes him or herself to be a vitalpart of the natural environment. When managers of SE believe that performing a given behavior will shape positive results, they will possess a positive attitude toward performing the behavior. At the opposite, performing the behavior will lead to negative consequences will hold an unfavorable attitude. Attitudes toward the behavior are found to associate well with the corresponding behavior, and because they can be evaluated ahead of time, they can be used to expect behavioral performance, … and enhance our understanding of the reasons why people exhibit or fail to exhibit a certain behavioral tendency (Ajzen, 1985).In conclusion, in the context of current study attitude represents what managers of SElike and dislike, Assumingly, their decisions to adopt environmental disposed of E-waste practices are often based on their environmental attitudes

As long as environmental disposed of E-waste is at early stages in the SE, I would employ moderating of attitude toward environmental disposal of E-was teon the relationship between institutional pressures and intentions to adopt environmental disposal of E-waste. Accordingly,

H7: A *manager's attitude toward environmental disposal of E-waste practices will be positively related to their intentions to adopt environmental disposal of E-waste.***3-5Intentions to adopt environmental disposed of E-waste**

Presumably, environmental disposed of E-waste practices adoption is a realistic way for organizations to tackle the current environmental problem result from accumulate E-waste. An important competitive advantage can be created by making the

company distinguish itself from other SE by means of adoption this practice. At the same time, it also can be regarded as a means to improve the organizational image and economic performance (Lie and Ngai,2013).The adoption of environmental disposed of E-waste practice can be an example of organizational behavior request by institutions if the motive for adoption is to get accepted rather than to maximize organizations' efficiency.

It is currently a nascent field and there is lacking both theoretical and empirical research on the topic in Iraq. Since SE under increasing institutions pressures to reduce the negative of impact IT on their environment, environmental disposed of E-waste adoption is interesting for our sample. Given that an increasing number of managers is experimenting with using environmental disposed of E-waste practice, there is an emerging need to understand their intention of adopting as key factors for these practices flourishing. The intention to adopt of environmental disposed of E-waste practice is said to have additional motivational factors beyond of those of standard IT adoption (Molla and Abareshi 2014). As such, these motivational factors may include economic benefits, regulation requirements, stakeholder obligations and ethical reasons, which all need to be taken into account when exploring and analyzing factors which may influence the adoption of environmental disposed of E-waste practice (Thomson and belle,2015).

Even though researches organization environmental disposed of E-waste practice adoption has recently proliferated in IT discipline, there seems to be considerable overlap between these factors, and there is difficulty in separating those. However, SE managers may choose to adopt environmental disposed of E-waste practices either because of pressures or reap benefits. They are seemingly right because it is a confusing situation, and they definitely don't need to stay away.

In line with earlier studies, I conceptualize intention to adopt of environmental disposed of E-waste practice as the dependent variable. While it was totally understandable to work on the

economic performance of the managers of small enterprises, managers of small enterprises then started to realize that ignore environmental performance something strange. Diffusion and penetration of E-waste practice throughout the organization promoting the benefits of reducing power consumption and carbon emissions, improving operation system performance and increasing interaction and collaboration (Deng and Ji,2015). However, in lieu of the emerging role of E-waste management and it benefits, it is imperative to understand that continued the useof environmental disposed of E-waste practice would dominate the development and flourish of GIT practices.

4-Methodology

4-1Sample

The sample was limited to managers of SEsas long as E-waste as a concept and practice are a new and managers are assumed to possess higher level of awareness and knowledge compared to other groups, and were directly involved in their firms environmental disposed of E-waste practices adopt decisions thereby can be expected to be competent to assess this practices adoption for the purpose of and this research. A cover letter explained the purpose of the study, sought cooperation for participation and requested that the questionnaire was completed by the manager of the SE. Our research was carried out in Thi-Qar province. Of 180 managers in the sample, 130 responses were accepted to participate. After two reminders, from 130 responses we received (78%), eleven responses were discarded from the analysis due to the vastly incomplete response rate (81%).The high response rate may be happening because of the follow-up procedure for sending reminder letters and phone calls. In this study, the data was collected using a five-point Likert Scale (5 = very much, 4 = much, 3 = moderate, 2 = little, 1 = very little) for each item since it is the most widely used and effective tool for scaling responses in survey-type studies.

4-2Data analysis

The researcher employed (PLS) structural equation modeling to test the hypothesized relationships in this study. PLS is considered suitable for this study owing to its good prediction capability and minimum demands in terms of sample size and residual distributions (Chin,1998).PLS was preferred over covariance based techniques such as LISREL in light of our small sample size, relative to the number of indicator items in the model. Following (Anderson and Gerbing,1988) we adopted a two-step approach to testing the models. First, we conducted a confirmatory factor analysis (CAF) to assess the measurement properties of the reflective latent constructs. Second, we performed a structural equation to test research hypotheses.

4-3 Result

Vennkatraman and Grant (1986) recommended that survey instrument use

research should use scales (1) with multiple, higher level items rather than single

nominal items (2) that are internally consistent, and (3) that are valid. Because literature reviews showed that well-established measurement existed for all constructs, we use existing measures to operation alize the constructs. The scales for the three institutional pressures namely coercive pressure, mimetic pressure, and normative pressures were adapted from prior studies. Coercive pressures from suppliers, government, and customers as a six-item reflective construct are adapted from Teo et al. (2003) Liang et al (2003). The mimetic pressures were measured as a five-item reflective construct and normative pressures as a four-item reflective construct, both being adapted from Krell et al (2016). The attitude toward environmental disposal of E-waste practices adoption was measured as a three-item reflective construct adapted from Wang et al (2016). Depend variable was measured as three-items adapted from Guo et al (2016). All scale items were rephrased and minor adjustments of the wording of some items were done to ensure

they capture the context of E-waste adoption driven by institutional pressures in the English languishes version. Because the respondents were Arabic, back translation method was used to ensure the translation validity. Before administering the survey, we sought input from an expert panel to validate and refine the research instrument (Bagozzi and Phillips,1982). A panel of eight academics with research expertise on IS, IT usage, and IS adoption success at College of Economic and administration at Thi-Qur university and University of Sum eru were asked to assess the appropriateness of the survey instrument. In addition, we involved a practitioner panel of IT managers to assess the understandability of the questions. Feedback from both expert panels suggested that our instrument was appropriate and understandable

4-4 Measurement

The psychometric properties of the measurement scale were assessed in terms of reliability, discriminant validity, and convergent validity. In accordance with prior studies, we assessed the validity and reliability of the reflective items and constructs by examining the loadings of items on their respective latent variable (Hull and, 1999).Scale reliability and validity were assessed using confirmatory factor analysis to extract the factors. (CFA) Principal component analysis and the method of Maximum Likelihood was used. Bagozzi and Phillips (1982) mentioned CFA over exploratory factor analysis in areas with strong a priori theory. The purpose of the study is theory testing and where pre-validated scales are being employed, as was the case in this study. CFA was performed in this study using the (PLS) approach.(PLS) was used to test the hypothesized relationships among the study variables. PLS is a second-generation multivariate technique that facilitates the testing of the psychometric properties of the scales used to measure a variable, as well as estimation of the parameters of a structural model, i.e., the strength and direction of the relationships among the model

variables (Fornell,1982). The higher loadings imply that there is more shared variance between the construct and its associated items than error (Hulland 1999).

The results confirmed the existence of five factors with eigenvalues greater than 1.0 that accounted for 84% of the total variance. The criteria used to identify and interpret factors were each item should load 0.50 or greater on one factor and 0.35 or below on the other fore factors (Igbaria et al.,1995). Table(1) shows that factor (1) (with 6 items) measures Coercive pressure. Similarly, factor 2 (with 5 items) and factor (3) (with 4 items) measure Mimetic pressures and Normative pressures respectively. Also, factor 4(with 3 items) measure E-waste adoption, factor (5) (with 3 items) measures intention. These results, therefore, approve that each of these constructs is one-dimensional and factor ally distinct and that all items used to operationalize a particular construct loaded onto a single factor.

Commonalities are describing as the proportion of each variable's variance that can be explained by the factors, and the high value of the communalities reflected the ability of this test to measure the capacity in which set for. It has achieved all items ratio exceeded (0.70), a high percentage. five factors were identified, all items loaded heavily and significantly (at $P<0.05$) on their respective constructs; the results are indicative of individual item reliability.

Table 1
Factors analysis matrix

Items	Mimetic	Coercive	Normative	Attitude	Intention	communalities
MI1	0.81	0.16	0.17	0.19	0.18	0.77
MI2	0.80	0.09	0.19	0.20	0.10	0.73
MI3	0.83	0.12	0.12	0.10	0.16	0.74
MI4	0.85	0.11	0.22	0.08	0.14	0.81
MI5	0.80	0.10	0.11	0.18	0.19	0.70
CI1	0.13	0.82	0.13	0.14	0.08	0.73
CI2	0.14	0.80	0.16	0.15	0.08	0.73

CI3	0.09	0.81	0.17	0.14	0.15	0.73
CI4	0.08	0.81	0.16	0.11	0.14	0.70
CI5	0.14	0.83	0.11	0.12	0.11	0.73
C16	0.11	0.84	0.12	0.09	0.10	0.74
NI1	0.08	0.12	0.85	0.13	0.08	0.76
NI2	0.16	0.13	0.86	0.16	0.09	0.80
NI3	0.18	0.07	0.88	0.15	0.12	0.86
NI4	0.10	0.06	0.87	0.22	0.17	0.83
AT1	0.07	0.08	0.11	0.87	0.17	0.79
AT2	0.07	0.11	0.12	0.89	0.10	0.83
AT3	0.8	0.09	0.16	0.90	0.09	0.88
IN1	0.11	0.08	0.09	0.18	0.88	0.83
IN2	0.12	0.12	0.11	0.11	0.91	0.86
IN3	0.13	0.05	0.10	0.22	0.91	0.88
Eigenvalue	3.53	4.18	3.29	2.71	2.72	16.43
Explained variance%	0.21	0.25	0.20	0.17	0.17	

CI= Coercive pressure; MI= Mimetic pressure; NI= Normative pressure; AT= Attitude; 1N= Intention

Consistent with prior studies we assessed the reliability of our scales using composite reliability (CR) (Werts et al., 1974). Composite reliability is preferred over Cronbach's a because it offers a better estimate of variance shared by the respected indicators and because it uses the item loadings obtained within the nom ological network (Hair et al,2006). Furthermore, composite reliability is perceived as a stronger reliability assessment when compared to Cronbach's and is considered a more conservative test of reliability (Garver and Mentzer, 1999). As indicated in Table 2, the composite reliability scores for all scales exceed the minimum threshold level of 0.70 (Kline, 1998), thus indicating the reliability of the scales used in this study.For discriminant validity, scholars have suggested that the square root of average variance extracted (AVE) of the

constructs should exceed the inter-correlations among the constructs in the mode (Fornell and Bookstein,1982).

The correlation matrix presented in Table 2 indicates that the square roots of AVE on the diagonal are greater than the corresponding off-diagonal inter-construct correlations. Thus, the discriminant validity of all factors was supported. Self-reported data may be affected by common method variance (Fornell and Larcker:1998). In addition to procedural remedies, such as ensuring anonymity and randomizing the survey questions, we performed Harman's single-factor test to examine whether this study was limited by the common method bias (Podsakoff et al.,2003). We performed a factor analysis to test whether only one factor emerges and to see whether one single factor accounts for the majority of the variance. Our results demonstrated that we produced a multifactor solution, and the ''largest'' factor explains only 28% of the variance. Thus, common method bias does not seem to be of concern. Additionally, we also examined correlations between our variables.

Table 2

Matrix of in tercorrelations among study variables

	Coercive	Mimetic	Normative	Attitude	Intention	CR
Coercive	***0.82***					0.88
Mimetic	0.27	***0.83***				0.81
Normative	0.29	0.31	***0.87***			0.86
Attitude	0.36	0.29	0.36	***0.89***		0.85
Intention	0.42	0.41	0.46	0.49	***0.90***	0.86

Diagonal elements represent AVE value

Inter correlations matrix (see Table 2) does not indicate any highly correlated factors (the highest correlation is r <60,

whereas evidence of common method bias would have resulted in extremely high correlations (r>0.90) (Pavlou et al., 2007). In summary, our results showed that neither case exists; therefore, our data do not indicate evidence of substantial common method bias (Chin et al., 2003). The convergent validity of the constructs which examines whether individual indicators are indeed measuring the constructs that are purported to the measure was determined by calculating the average variance extracted (AVE) and by examining the indicator loadings in line with the perspective (Fornell and Larcker,1998). AVEs as we show in Table 2, the diagonal elements (square root of the AVE for each construct) were greater than the off-diagonal elements, indicating that each construct shared more variance with it measures greater than with other constructs (Fornell and Larcker,1981). Furthermore, loadings were above the recommended threshold of 0.6 (Chin:1998) thus supporting convergent validity. The results are presented in Table 1 and 2. The discriminant validity, which assesses whether individual indicators can adequately distinguish among different constructs, was determined by examining the square root of the AVEs in relation to the inter-construct correlations (Gefen and Straub:2005). Based on Table 2, none of the inter-construct correlations were larger than the square root of the AVEs. Hence, we conclude that an acceptable level of discriminant validity was achieved.

4-5Structural model

To empirically test the postulated hypotheses, path analysis was performed by applying Ordinary Least Squares hierarchical multiple regressions on the research variables. Path analysis is a method of measuring the influence of explanatory variables along each separate path in a system and finding the degree to which variation of a given effect is determined by each particular

cause. We took several steps to check for possible violations of the assumptions underlying path analyses. First, an examination of the composite reliability indicated satisfactory levels (ranging from 0.81 to 0.88) of internal consistency reliability among the multi-item scales. Second, we checked the in tercorrelation matrix in Table 2 for evidence of mu lticollinearity among the independent variables. Since all the correlations are below 0.50, mu lticollinearity is not a problem. Third, the Durbin-Watson test for autocorrelation indicated the absence of correlated residuals. The value of Durbin-Watson statistic is (1.73-1.82),d_L=163,d_u=168 .To obtain the path coefficients required to test the research model, iterations of multiple regressions were performed. First, we regressed E-waste adoption on institutional pressures. In a similar manner, E-waste continuance intention was regressed on the exogenous variable.

Comparison of the estimated correlations as represented by the sum of the direct and indirect effects (i.e., total effects) with the original correlations between the independent variables and the dependent variables provides further evidence of the "goodness of fit" of the model. With the criterion that the absolute difference between the reproduced (i.e., total effects) and original correlations does not exceed (0.10) (Namboodiri et al.,1977). The path coefficients and explained variances of the structural model are shown in Fig. 2. The PLS result of the structural model, including the standardized path coefficients, significance, and variance explained (R2) are shown in this figure. The path coefficients from the three components of institution pressures(coercive pressure, normative influence and mimicry pressure) to E-waste were significant. Also, they had significant effects on continuance intention. Likewise, the path coefficient

from E-was teadoption to continuance intention was significant, indicating that all of the hypotheses were supported. (H1) stated that coercive pressures positively influence the attitude toward environmental disposal of E-waste. Consistent with our expectations, this hypothesis was supported ($\beta = 0.38$, $T = 2.01$, $p < 0.5$). Values of the path from mimetic pressures to the attitude toward environmental disposal of E-waste ($\beta = 0.36.$, $T = 2.36$, $p < 0.05$) this lead to acceptance of (H3). Similarly, hypothesis (H5) stated that normative pressures positively influence the attitude toward environmental disposal E-waste was supported ($\beta = 0.42$, $T = 2.31$, $p < 0.05$), also hypothesis (H2) ($\beta = 0.43$, $T = 2.39$, $p<0.05$) was supported. (H7) stated that the attitude positively in fluencesintentions to adopt environmental disposal E-waste. This hypothesis strongly was supported ($\beta = 0.45$, $T = 1.99$, $p < 0.05$). As stated in(H4), the mimetic pressures have a positive effect on intentions to adopt. This hypothesis was also supported ($\beta = 0.39$, $T = 2.11$,$p < 0.05$). Finally, (H6) stated that normative positively affect intentions to adopt. This hypothesis was also supported ($\beta = 0.41$, $T = 3.42$, $p < 0.05$).

5-Discussion

SEs are under growing pressures from competitors, customers, regulators and community groups to adopt practices that are more environment-friendly, which provides a win-win situation for the internal as well as external stakeholders of businesses. It has thus become important for SE these days to integrate environmental disposal of E-waste viewpoint into their strategy. Recently, environmental disposal of E-waste has become the rule rather than the exception for all SE in Iraq. To get accepted into their environment and compete effectively SEs often must adopt this practice. So, the primary objective of this study was to empirically examine the effect of institutions pressure son the

attitude of managers of small enterprises in Thi-Qar province to adopt environmental disposal of E-waste.Three research questions drove this study: (1) Do institutional pressures (coercive, mimetic, and normative) effect in the intentions of managers SEs to an environmental disposal of E-waste? (2) Are their effects different? (3) What is the role of attitude as a mediating variable?

The current study addressed these questions through the development and empirical testing of a theoretical model. Because attitude toward environmental disposal of E-waste practices is the previous step to adopt it, this relationship was mediated by theattitude toward environmental disposal of E-waste. In the following section, we first discuss the main findings and then presents the theoretical contributions and practical implications in more detail.

The results demonstrate that these three pressures have a positive influence on how responders had shaped positive toward environmental disposal of E-waste. During an interview with a couple of responders, they stated that their firms have a number of successful experiences in recent years and enjoy local reputation resulting from the adoption of environmental disposal of E-waste. Nevertheless, they are currently facing pressures from government, suppliers, and customers that force them to put this point on their agenda. Consequently, coercive pressure smay motivate subjects to adopt environmental disposal of E-waste. In the same context, regulations are as ignificant source of coercive pressurescompared with suppliers and customer's pressuresbased on the high proportion of the research sample agreementon the items relevant. This reflects the effectiveness of government efforts in guiding green behaviors across organizations, specifically when such behaviors have an organization-wide influence (Chen et al.,2011). These findings are consistent with Molla and Abareshi(2014) finding, where government policies that encourage GIT practices during IT life cycle were among the mostimportant reasonfor adopted GIT practices. Chen et al

(2011) found that coercive pressuresin the form of regulations had the most impact in the areas of pollution prevention and sustainable development compared with mimetic pressure. In the perspective of Chen and Chang (2014), the government in a developing country is playing an important role in drawing the environmental constraints and environmental disposal of E-waste adoption. Waste from electrical and electronic equipment is one of the fastest growing streams of waste in the world. Consequently, worldwide governments haveissued regulations to deal with the post-consumption phase of these devices (Favot and Grassetti:2017). In terms of this study, we attribute this result to the efforts of the federal government and local administrators to impose regulations to control environmental activities of small enterprises and diffuse pro-environmental practices, especially, as most managers of SE try to build on their economic goals, and achieve their environmental goals, and it is a good idea to balance these goals, but they are completely forgetting this. This suggested that the attitude of our simple toward environmental disposal of E-waste form eddue to external powers. Unlike study Chen et al (2011), which excluded normative pressure, the results of our study indicate that normative pressuresrepresent a source of attitude toward environmental disposal of E-waste. In other words, this suggests that the decision-makers in the surveyed companies have put in their minds the benefits that can be obtained when they Adopt it. Likewise, they want to strengthen their relationships with other firms and professional associations already had practiced green IT to gain benefits. The difference between the findings of two studies can be attributed to the prevalence and maturity of E-waste practices.

In sum, the great majority of respondents hold a positive intention towards recycling electronic devices, the better explains behavioral intention to E-waste disposal adopt.

We also found support for our hypothesis that mimetic pressures have a positive effect on environmental disposal of E-waste adopt. Krell et al (2016) observed that imitating other

organizations from the institutional environment, which are similar to the firm, appears to be a positive tactic to enrich the firm's learning experience. Tingling and Parent (2002) demonstrated that decision maker would rather imitate another organization's IT choice than following recommendations produced internally; that is, a decision maker would discard results from an internal evaluation of different technology alternatives in favor of copying another organization's choices. Reaping huge benefits and satisfy their supplier and customers are the main purposes of competitors when they adopted environmental disposal of E-waste. This result is in line with the finding of Molla and Abareshi (2014) who show there area few firms that leverage the investment in the GIT as potential sources of competitive advantage which motived other to copy it. Along the same lines (Coffey et al.,2013) organizations were unlikely to be influenced by the number of other organizations adopting Green IT practices, but if they observed positive outcomes in other organizations as a result of adopting those practices, then they were more likely to adopt such practices themselves. A plausible explanation for this observation may be based on the Another point, because is still an emerging phenomenon, most SEsare using it to improve their ability to effectively execute operational processes. Instead, acouple of them has recognized that environmental disposal of E-waste practice enables a fundamental shift in the way IT capabilities are delivered and it can be used to improve operational performance and to combat environmental issues. Consequently, imitating the successful one is not uncommon. Additionally, there is therealization that E-waste management has played a crucial role in the race towards getting market share.

Extant research suggests that effective and efficient use of environmental disposal of E-waste practice by organizations is dependent on the level of market dynamism within the external environment. In the light of the above argument, the institution

pressures effect widely in adopting environmental disposal of E-waste. Thus, the first equations of this study were answered.
Existing research has shown that adopt environmental disposal of E-waste should not be regarded as full compliance with environmental protection rules which may be imposed by organizations in the organizational field; instead, it should be used as a force to improve performance, build and strengthen their market competitiveness. For this reason, adoption environmental disposal of E-waste practice becomes a strategic option which is also affected by institutional pressures. The model of our study indicates there are three main institutions factors influencing the take-up of green IT – coercive pressure, normative influence, and mimicry. These factors on similarly affect Intention to adopt the practice environmental disposal of E-waste. Contrary to expectations, whereas the result showed that coercive pressures were the greats impact on attitude, turning out that mimicry and normative pressures were respectively the most influences in Intentions managers of small enterprises to adopt environmental disposal of E-waste. This means that if other organizations in the industry are using their environmental disposal of E-wastepractice standing as responsible business behavior to gain market share this results in accepting this behavior would be accepted practice and would become it a common daily activity. From another side, if IT, green or not, can reduce costs or increase revenue, the organization will be more receptive to such initiatives. Our finding indicated that the influence of customers, suppliers, government and professional bodies actions in encouraging small enterprises on intentions to continue the practice E-waste is ano longer main impact. This trend might be attributed as (Molla and Abareshi.,2014) observed that in pressures from market forces becomes a relevant mimetic motive when early adopters' demonstrate satisfactory outcome out of their green practice. We find that attitude toward environmental disposal of E-waste practices has a significant influence on the environmental disposal of E-waste practices

adoption. When there is a shift or major change in the SEscontext, the shift can dramatically reshape the industry structure and define the context of the competitive strategies used by small enterprises to build new sources of competitive advantage. As a result of operating in the environment need to pursue and address environmental degradation, SEs have to assiduously persevere on the practice green IT. Another explanation to the adoption of environmental disposal of E-waste practice appearing to be significant in SEs environments could be the tendency of the organizations in such an environment to exhibit environmental culture and commitment of pro-environment behavior in the future after understanding the importance of it. In other words, managers of SE awareness result in the belief in the usefulness and ease of its adoption. This means as the manager awareness increases their intention of continuance use of environmental disposal of E-waste practice increases as well.

In conclusion, the result of this study provided interesting insights into institution pressures relate to attitude and adoption of environmental disposal of E-waste practices. In terms of practical contribution: First, the result of the current study can be used as a guideline for the managers to manipulate and organize the suitable process of adoption, diffuse and continuance trust environmental disposal of E-waste into their firms as a future way. The findings reveal that managers seek to adopt and continued using it to get accepted into their environment and gain economic benefits. Additional research using a wider sample of managers than those represented in the present convenience sample is necessary in order to confirm the generalizability of the findings to a larger population of SE.

The findings of the present study contribute to a better theoretical understanding of the factors that promote GIT adoptit and continuance intentions. The model explained ٧٤% of the variance in intentions to adopt environmental disposal of E-waste, and 44% of the variance in attitude toward this practice It

should be observed, however, thata large percentage of the variance remains unexplained to suggest the need for additional research incorporating potential unmeasured variables in the current study.

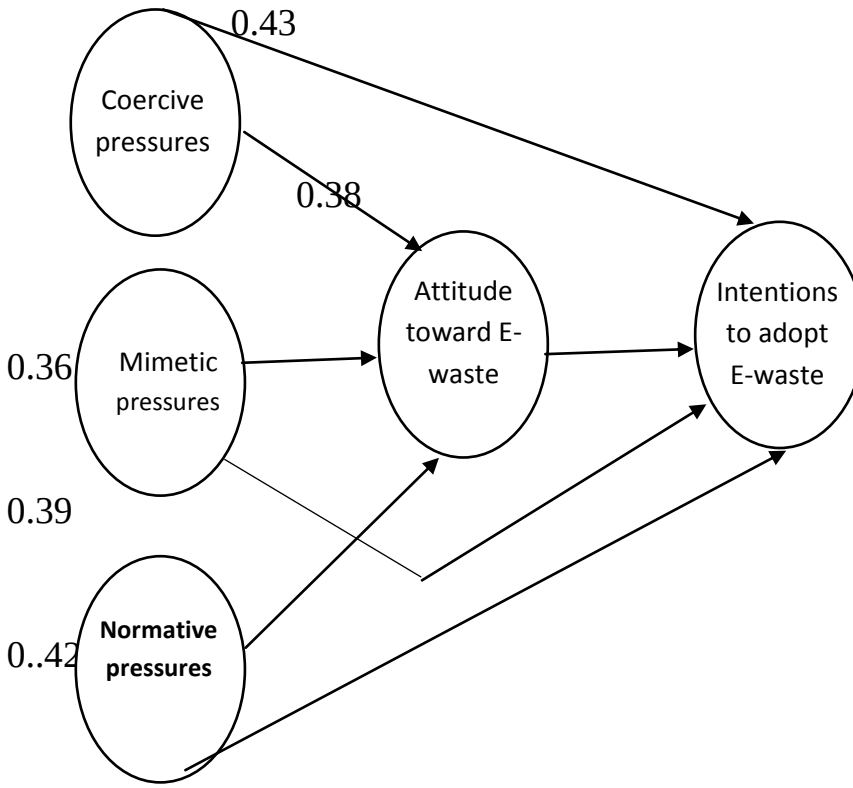

Fig. 2. Research model after test

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Appendix A

Please mark the number to indicate the extent to which you agree with the following statements.

	Item	very little	little	modera te	much	very much
1	The government requires from my enterprise to disposal e- waste from the environment					
2	Using environmental disposal e-waste is necessary for legal compliance					
3	Regulatory requirements to enforce penalties for enterprise which not doing environmental disposal of e- waste					
4	My enterprise well-being depends on suppliers that have adopted the environmental disposal of e-waste					
5	My enterprise cannot easily switch away from suppliers that have adopted the environmental disposal of e- waste					
6	My enterprise well-being depends					

	on their customers that supported environmental disposal of e-waste					
7	Our main competitors who have adopted environmental disposal of e- waste greatly benefitted					
8	Our main competitors who have adopted environmental disposal of e- waste are favorably perceived by others in the same industry					
9	Our main competitors who adopted environmental disposal of e-waste which are favorably perceived by their Customers					
10	My enterprise's competitors that have adopted the environmental disposal of e-waste are favorably perceived by theirSuppliers					
11	An environmental disposal of e-waste have been used by our competitors					
12	The proportion of my enterprise's customers have used environmental disposal of e-waste					
13	The proportion of my firm's suppliers used environmental disposal of e- waste					
14	The extent of my enterprise's decision to use environmental disposal of e- waste was affected by promotions by the government.					
15	The extent of my company's decision the using the environmental disposal of e-waste was affected by promotionsby industry, trade, or professional bodies.					

16	Environmental disposal of e-waste makes me feel very satisfied					
17	Environmental disposal of e-waste makes contribution to the society					
18	Environmental disposal of e-waste is everyone's responsibility					
19	I plan to keep using environmental disposal of e-waste practice in my job in the future					
20	I intend to continue using environmental disposal of e-waste practice in my job in the future					
21	I expect my use of environmental disposal of e-waste practice to continue in my job in the future					

Appendix B

Respondents industry

Primary business category	Respondents	Percentage
Building and construction	29	29
Financial services	25	25
Information technology services	17	17
Publishing	8	8
Entertainment	11	11
Education	6	6
Tourism	5	5