



Managing Green Recruitment to Attract Pro-Environmental Job Seekers: The Combined Effect of Green Organizational Process and Green Organizational Distinctiveness of «Handicap» Principle

Thèse

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Résumé en français

L'accent mis sur la durabilité environnementale au sein des entreprises et l'engagement actif des organismes à but non lucratif globalement à trouver des solutions aux problèmes environnementaux au cours des dernières décennies ont tous deux contribué à l'essor du mouvement écologique. Parmi les facteurs explicatifs de ces tendances figurent la dégradation environnementale dans certaines régions du monde et l'augmentation de notre empreinte écologique individuelle, donnant lieu à une responsabilité socio-écologique partagée. Un autre facteur clé concerne la reconnaissance récente des nombreux bénéfices que la performance environnementale peut apporter aux entreprises, y compris des bénéfices socio-écologiques et financiers essentiels au développement durable. Cette thèse s'inscrit dans le paradigme de pensée qui défend l'idée que pour contribuer à un avenir écologiquement viable, propre, sûr et sain pour le plus grand nombre, une des missions des organisations est de contribuer à la prévention des crises environnementales. Celle-ci implique une responsabilisation des employés en termes d'engagement dans des pratiques écologiques appropriées de collaboration qui sont ni sous-standards ni extrêmes. Les attitudes et comportements pro-environnementaux des employés apparaissent en effet comme des facteurs déterminants de la performance environnementale des entreprises, notion qui englobe la gestion environnementale et les pratiques environnementales. Qu'on soit un pionnier en la matière ou un nouveau venu dans le domaine de l'écologie, disposer d'une main d'œuvre pro-environnementale, sous la forme de managers talentueux et de travailleurs formés et qualifiés, est essentiel pour garantir sa survie et son succès dès lors qu'on possède des valeurs écologiques et qu'on est disposé à s'engager dans des pratiques respectueuses de l'environnement, c'est-à-dire des comportements pro-environnementaux au niveau organisationnel. Par conséquent, l'attraction d'individus pro-environnementaux exige une approche cohérente afin d'assurer et de maintenir le niveau de performance environnementale des employés, mais aussi pour réduire l'intention de quitter l'organisation prématurément. Dans la mesure où le recrutement et la sélection constituent des éléments fondamentaux du cycle de vie environnemental d'une organisation dans l'optique d'obtenir une main d'œuvre pro-environnementale de qualité, l'attraction de candidats pro-

environnementaux peut être bénéfique si elle est pratiquée de manière proactive dans le but d'identifier, de recruter, d'attirer, et de sélectionner les bons candidats pro-environnementaux. Cependant, dans un contexte croissant de marketing et de greenwashing où l'on voit émerger une certaine malhonnêteté autour des attributs environnementaux à la fois chez les recruteurs et chez les candidats, la question qui se pose alors est de savoir comment attirer des candidats de façon juste et éthique afin, d'une part, de générer des perceptions positives de l'attractivité environnementale d'une organisation et, d'autre part, de détecter les bons candidats. De même, dans un contexte difficile où la manipulation et la déception sont désormais monnaie courante, et en particulier dans le contexte d'une véritable « course aux armements », quels sont les facteurs de signalisation qui font que des candidats et recrues pro-environnementaux percevront un employeur comme étant véritablement pro-environnemental et en accord avec leurs valeurs ? Quels signaux écologiques sont difficiles à falsifier ? S'appuyant sur les principes de la théorie du signal, et adoptant une approche fondée sur le savoir, cette thèse aborde ces problématiques émergentes en examinant la portée de la gestion des capacités écologiques organisationnelles et des pratiques écologiques proactives de recrutement dans l'attraction d'employés actuels et futurs. Les résultats démontrent la valeur d'un modèle fondé sur le principe de l'« Handicap » transmettant des valeurs éthiques en termes d'attraction et comportent aussi un certain nombre d'implications pratiques dans l'optique de définir, de recruter, de détecter et de sélectionner les meilleurs candidats pro-environnementaux ayant la même orientation écologique que l'organisation employeuse.

Résumé in English

The pursuit for environmental sustainability of business firms and the active participation of not-for-profit organisations worldwide in proactive deal with environmental problems in recent decade have contributed a great effort to the environmental movement. One reason is related to the environmental degeneration in some regions and the increase in individual environmental footprint that urges the societal change in socio-ecological responsibility. The other reason is the recognition of green rewards that environmental performance brings to a firm, including both intrinsic outcomes and extrinsic outcomes ensuring sustainable development goals. This thesis envisions an eco-living future of clean, safe, and healthy toward which the participating organisations' environmental orientations need to comply to corporate ethics of green mission in terms of reducing social inequality and preventing environmental crisis. This requires the appropriate enablement of corporate environmental performance of no below standard and no extremism from both green and nongreen actors. In corporate green mission, employees are accountable for their participation in environmental practices. Their pro-environmental attitudes and pro-environmental behaviours determine their corporate environmental performance, which is conceptualized to encompass environmental management and environmental operation practices. To both the pioneers and the newcomers in this green field, forging a pro-environmental workforce of talented managers and fully skilled workers is vital to the organisational survival and success provided they have ecological value congruence and are willing to engage in focus environmental orientation, meaning organisational pro-environmental behaviours. Therefore, attracting the fit pro-environmental individuals should be executed in a consistent manner to recruit and maintain their environmental performance as well as to remove their intention to leave early. Since green recruitment and selection is the foremost in the green organisational life cycle to guarantee pro-environmental workforce in quality, green candidate attraction is worth doing in a proactive manner in order to recruit, attract, identify and select the right type of pro-environmental talents. However, in the context of blooming Marketing and greenwashing or in case where there is dishonesty on environmental characteristics of both recruiters and applicants, how the organisational attraction should be

conducted in a pro-environmental and corporate ethic manner to generate early the job seekers' positive perceptions of organisational attractiveness for environment in the one part and detect the fit ones in the other? Likewise, due to recent decades' rapid changing life of manipulation and deception, particularly in an « arms race », what key signalling factor is to make the pro-environmental talents and potentials recognise a true pro-environmental employer who is compatible with them? Which pro-environmental signal is hard-to-fake? From the tenet of signalling theory and from a knowledge-based view, this thesis responds to these emerging issues by researching into the insight of management of green organisational capacity and green recruitment to attract existing and future employees, which are happening now. The overall findings indicate a stabilized environmental movement which is comprised of green organisational processes in conformity with optimal heterogeneity of green organizational distinctiveness representing the organizational ecological value to sustain an organisational hard-to-fake character. A model of « Handicap » principle conveying the ethics of pro-environmental attraction and practical implications for defining, recruiting, detecting and selecting the right type of pro-environmental talents with a focus environmental orientation of the employing organisation are recommended.

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Abbreviation

CEP	Corporate Environmental Performance
CES	Corporate Environmental Sustainability
CSP	Corporate Social Performance
ECWB	Environmental Counterproductive Workplace Behaviour
EI	Environmental Innovativenesss
EM	Environmental Management
EMS	Environmental Management System
ES	Environmental Sustainability
GHRM	Green Human Resource Management
GRS	Green Recruitment and Selection
HR	Human Resource
HRM	Human Resource Management
OAE	Job seeker's perceived Organisational Attractiveness for Environment
OCBE	Organisational Citizenship Behaviour for Environment
R&D	Research and Development
SHRM	Strategic Human Resource Management
TBL	Tripple-bottom line
TPB	Theory of Planned Behaviour

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Preface

This thesis is in the form of insertion of two scientific papers and one book chapter, of which research topics are included in learning courses belonging to my doctoral programme and under my thesis project. These three articles were published in 2018-2019 and I am first author of the three. The inclusion of these articles for the purpose of this thesis is already approved by the co-authors. Details as follow:

Article 1: Scientific paper

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THESIS INTRODUCTION

Attraction, as defined in Oxford Learner's Dictionaries, is a force that pulls things towards each other. When it comes to environmental consciousness in the workplace, if such a force exists in the employee-employer relationship in respect of environmental sustainability, it is both vigilant and identifiable. That common sense understanding of the concept is viewed in this thesis as meaning a shared environmental orientation and agreeableness about corporate environmental performance (CEP) practices, focusing in particular on the manner of doing. The classical school of thought in recruitment viewed this practice as going beyond a contractual relationship to attract and select the right types of employees (Rynes and Barber, 1990). In the belief that this vision is critically predominant in the context of green recruitment and selection (GRS), this thesis responds to the corporate green mission by systematically researching intertwined management practices with the aim of identifying, attracting and selecting the right pro-environmental job seekers who are talents to an organisation's stabilized environmental movement. Accordingly, my research discovers that « Handicap » principle, a metaphor for honest signalling, is pertinent to an ethical value of green candidate attraction, such that an employer needs to have an underlying quality in order to signal to attract targeted pro-environmental job seekers. Conducted within the framework of my doctoral programme, this thesis is a convergence of two systematic, insightful researches, two different studies coming from different directions to meet at the same point: forging a pro-environmental workforce for a corporate green mission. The first study researches the question of managing GRS, the cumulative results of which are obtained throughout the first four chapters. Meanwhile, the second study examines environmental innovativeness, the organisational prerequisites of eco-innovation necessary for building an eco-living future that is clean, safe and healthy. Both studies come to the conclusion that green absorptive capacity and green adaptive capacity are foremost skills for an environmental knowledge-intensive workforce so as to sustain the organisational ecological value that steers a company's CEP towards organisational eco-innovation in the longer term, whether radically or incrementally.

Focusing on the influential two-way relationship between people and the natural environment, my research examines environmental sustainability from two perspectives, environmental preservation and environmental conservation. Human beings are part of an ecosystem, and the more we live in an eco-friendly manner, the more viable our sustainable development becomes. Eco-innovation not merely serves to eliminate the pollution caused by human life on the planet but is also aimed to ensure a high quality of environmental services in which people feel comfortable without negatively affecting each other. Therefore, eco-innovation is on products, services, practices, processes, behaviours and policies. Therefore, the challenge will be to determine how to change people's behavioural tendencies and attitudes towards this environmental orientation which creates welfare to all given that we differ in the way we conceive of environmental sustainability and its relationships. In this regard, contemporary studies have found that it is the degree of eco-friendly conduct that cannot be excessive in relation with the economic and social aspects of sustainable development. Accordingly, the eco-innovation orientation probably has to deal with an environmental crisis involving far-right actors (Forchtner, 2019) and extremists (Perry and Scrivens, 2018), the rational antecedents of which include hate (Costello et al., 2019), prejudice (Cargile, 2015; Kende and McGarty, 2018), explicit or implicit bias (Triplett, 2012; Spencer et al., 2016), discrimination and perhaps racism (Paradies, 2005). These are barrier factors that restrict the ability of different actors to collaborate in moving towards corporate greening. As such, this thesis is an attempt to promote the ethics of corporate greening and its basic principle of trustworthiness, which are applied in every society and therefore cannot be compromised in decision-making, especially in business administration. The philosophy underlying the essence of the relationship between people and the natural environment is emphasized throughout the various chapters. Given the focus of the thesis on GRS, the insights of candidates' agreeableness and willingness are beneficial to environmental crisis management.

The primary objective of this thesis is to explore a guiding principle and associated practices for attracting pro-environmental individuals who have an awareness of environmental sustainability issues and are able to contribute and develop their talents

consistently as part of a company's environmental innovativeness. The secondary objective is to investigate an ongoing green organisational process of CEP that forms the organisational green capacity to attract in a proactive manner, the best practice to attract the right pro-environmental talents prior to green recruitment. Through the lens of signalling theory (e.g. Celani and Singh, 2011), and from a knowledge-based perspective (e.g. Nonaka, Toyama and Nagata, 2000), this thesis delves into the insights and meanings of GRS that have not so far been discovered by the existing literature. Accordingly, this thesis aims to answer three research questions: (i) How should attraction be conducted in a right and corporate ethic manner to generate job seekers' positive perceptions of organisational attractiveness for environment on the one hand and to detect the right individuals on the other? (ii) What key signalling factor is to make the pro-environmental talents and potentials recognize a true pro-environmental employer with them? (iii) Which pro-environmental signal is hard-to-fake? In so doing, this thesis addresses both corporate ethical values and environmentally oriented management strategies, the interaction in a cyclic fashion of environmental management and green human resource management. Therefore, it satisfies both effectiveness and the efficiency, both of which are management fundamentals.

As regards effectiveness, the study as a whole satisfies the main objective of green candidate attraction in an attempt to understand organisational attractiveness for environment from participant perspective by examining potential job seekers' perceptions. As regards efficiency, on the one hand the research illuminates the know-how of an organisational green capacity to attract by green organisational routines that does not impose any costs or extra effort on the pro-environmental recruiters. On the other hand, it sets out a nonautomatic pro-environmental signalling method aimed at describing an employer's green capacity to respond to targeted pro-environmental job seekers' environmental needs in their own organisational green style that is both true to themselves and hard-to-fake. Therefore, this thesis comprises six chapters resulted from consecutive researches. The primary objective of the thesis, which is to understand the principle and practices involved in attraction, is achieved in the first four chapters, while the secondary objective, which is to understand the know-how of environmental movements, is addressed in Chapter 5 and Chapter 6.

Chapter 1 is a systematic review of the literature on GRS. Motivated by the results of Renwick, Redman and Maguire (2013), this research takes an initial step in green selection and found 18 applicable green practices that facilitate the process of identifying green candidates. This chapter is also a follow-up study on the effect of corporate environmental sustainability on green candidate attraction and its systematic results revealed important intervenors that drive participants in their perceptions of organisational attractiveness for environment. The chapter identifies the key to the approach as being participants' interpretation and perception of the received signals that predict the extent to which they are attracted to a pro-environmental employer (the signaller). Meanwhile, the key implication is the person-organisation ecological value fit. These keys encouraged me to focus my research on the identified signal-based attracting mechanisms while seeking a pertinent existing principle that both guides a pro-environmental employer in the search for suitable pro-environmental individuals and helps the right pro-environmental candidate recognize this employer's underlying quality.

Chapter 2 examines CEP (Trumpf et al., 2015) at both the strategic level, which focuses on environmental management, and the operational level, which emphasizes the importance of employee involvement and voluntary participation in environmental performance. This work is intended to go a step further in studying the signal-based mechanisms identified by Jones, Willness and Madey (2014) while leveraging the « Handicap » principle of signalling theory in an environmental sustainability context. By investigating the environmental benefits that potential environmental-oriented employees tend to envision for themselves and the tendency of their green behaviours, this research is a valuable contribution and proposes a conceptual model of « Handicap » principle for GRS, informing perceived signal honesty and perceived signal consistency as two vital keys in green candidate attraction and as favourable moderators for job seekers' perceived organisational attractiveness for environment (OAE).

Chapter 3 designs a qualitative empirical study set out within the scope of my thesis project with the aim of examining the effect of pro-environmental signalling about CEP consistent with the « Handicap » principle defined in Chapter 2 in a real-world business

context. Accordingly, two focus group discussions were carried out to survey potential job seekers' perceptions of an environmentally oriented enterprise and test three hypotheses. In the first part, chapter 3 introduces a theoretical framework involving four cognitive targets that a GRS needs to overcome to attain targeted pro-environmental talents' agreeableness towards OAE. The second part is a study design of suitable rigour and describes the data collection method and coding techniques used. The enterprise is a carmaker in the Vietnamese automobile industry.

Chapter 4 presents the results of the empirical investigation set out in Chapter 3. The results were supportive and confirmed the workable model in attracting pro-environmental job seekers. In other words, participants' perceived value fit with the company, perceived organisational green prestige, and perceived favourable employee treatment intervene between their perceived signals about the company's CEP and OAE. Perceived value fit was found to be a necessary condition, while perceived organisational prestige and perceived favourable employee treatment are two sufficient conditions. Furthermore, the results not only confirmed the combined effect of perceived signal honesty and perceived signal consistency as moderators but also highlighted signal reinforcement as another necessary condition. Importantly, responsive to the natural phenomenon of a GRS regarding incomplete information, the empirical study found that verified logical information is a determinant for participants' perception of pro-environmental employer and company trustworthiness. Moreover, the study contributes findings to green organisational memory regarding environmental cues that can facilitate pro-environmental job seekers' judgemental confidence about their potential employer's trustworthiness and facilitate their reading of a pro-environmental recruitment message. Finally, Chapter 4 has a number of managerial implications for pro-environmental signalling about CEP in systematic processing, concluding the answers to the first two thesis questions. Regarding thesis question 3, although the qualitative analysis confirmed the dimensions of signal honesty that are costly or hard-to-fake, it remains implicit about what pro-environmental signal is hard-to-fake in the context of corporate greening that people can trust.

Chapter 5 provides another systematic literature review examining environmental innovativeness, the prerequisite capabilities for eco-innovation. This chapter refines the concept of environmental innovativeness and synthesizes the literature, indicating the antecedents of the concept at the multi-layer firm level. The findings indicate that the two-way interaction of environmental innovativeness and environmental performance is critical to the overall performance of an environmental oriented company. From a knowledge-based view, the study resulted in an integrated conceptual model of environmental innovativeness at multi-layer firm levels in which organisational eco-dynamic capacity is a determinant, while green absorptive capacity and green adaptive capacity are two key enablers.

Chapter 6 sets out to capture a green organisational process that is built into the formation of the organisational green capacity to attract. First, striving to view OAE from the perspective of targeted pro-environmental job seekers while not losing focus on the purposeful work of detecting the right type of pro-environmental talents, this chapter aims to define and manage green organisational capacity to attract for green candidate attraction. Second, focusing on the third thesis question on hard-to-fake pro-environmental signals, this chapter investigates the process of green organisational distinctiveness. In doing so, this chapter identified that the hard-to-fake pro-environmental signal is the company's manner of doing, which is green organisational distinctiveness embodying organisational ecological value. The research work acknowledges the role of continuous learning in becoming an environmental knowledge-intensive company as part of a corporate green mission. Accordingly, consistent with the findings of Chapter 4, a pro-environmental workforce for such focus mission needs green absorptive capacity and green adaptive capacity to maintain the balance of necessary stability and change. The summative findings are plausible to the extent that they point towards a combined effect of the green organisational process and the green organisational distinctiveness of « Handicap » principle, which is found to be the best proactive effect. In essence, the findings have two implications. First, they reveal the organisational ecological value that derive from the core value of the organisation and specify the thoroughness and precision of these values in the present. Second, in order for this organisational ecological value to be recognized and perceived by pro-environmental talents

as being hard-to-fake, it must satisfy the optimal heterogeneity of green organizational distinctiveness, being positioned within the system of green organisational identity and demonstrated expressively in every organisational function.

This thesis is a study of GRS management principles and practices, representing a green employee life cycle for the green corporate mission. The results are cumulative, meaning that readers will only find the complete answers in the latter chapters of the manuscript. Most importantly, this thesis identifies and highlights the important role of organisational ecological value in guiding organisational pro-environmental behaviours and forming a sustainable green foundation for decision-making. The value of this thesis is in the refinement of the « Handicap » principle in pro-environmental attraction manner which is out of below standard and extremism. Overall, the philosophy underlying this thesis assumes intensive environmental knowledge through the maintenance of green organisational routines as the condition for green organisational green capabilities, without which environmental sustainability is impossible. Thesis limitations and directions for future research are presented in the conclusion.

Chapter 1

GREEN RECRUITMENT AND SELECTION: AN INSIGHT INTO GREEN PATTERNS

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1.1. Résumé

Objectif. S'il existe un consensus sur le rôle du recrutement et de la sélection écologiques (green recruitment and selection en anglais, ou GRS) en tant que dimensions importantes de toute approche écologique de la gestion des ressources humaines, aucune étude n'a été consacrée au terrain du GRS ou cherché à passer en revue la littérature. L'objectif de cet article est de combler cette lacune tout en examinant les questions suivantes : (1) Comment les organisations sélectionnent-elles les candidats en fonction de leur position pro-environnementale ? (2) Quels effets les pratiques de durabilité environnementale en entreprise (corporate environmental sustainability en anglais, ou CES) ont-elles sur l'attraction de demandeurs d'emploi pro-environnementaux ?

Méthodologie. Cet article consiste en une revue systématique de 22 articles publiés dans des revues à comité de lecture au cours de la période 2008-2017. Les articles examinant au moins une des deux questions de recherche étaient automatiquement retenues.

Résultats. Certaines entreprises choisissent d'appliquer des critères environnementaux lors du processus de sélection de candidats, alors que d'autres ne le font pas. Dans tous les cas, le fait de communiquer les valeurs et orientations environnementales d'une entreprise semble avoir des retombées positives dans le contexte du GRS. Les recherches antérieures ont identifié quatre facteurs médiateurs (fierté anticipée, perception de concordance de valeurs, attente de traitement favorable, perception de réputation et de prestige organisationnels écologiques) intervenant entre les signaux du CES d'une entreprise et les perceptions qu'ont les demandeurs d'emploi de l'attractivité d'une organisation. Cependant, l'impact de cet effet est influencé par cinq facteurs modérateurs (attitude pro-environnementale, conscience socio-environnementale, volonté d'avoir un impact significatif à travers son travail, certification environnementale, expertise du demandeur d'emploi).

Apports. Cet article propose la première revue systématique de la littérature sur le concept de GRS, ouvrant ainsi de nouvelles perspectives de recherche.

Mots clés : Recrutement écologique, revue systématique, attraction de candidats, demandeur d'emploi.

1.2. Abstract

Purpose. Although the role of green recruitment and selection (GRS) has been widely recognised as an important dimension of green human resource management, no study has ever mapped the terrain of GRS and reviewed the literature. The aim of this paper is to fill this gap while exploring the following questions: (1) How do organisations select candidates in line with their pro-environmental stance? (2) What impact do a company's corporate environmental sustainability (CES) practices have on attracting pro-environmental job seekers?

Methodology. This paper provides a systematic review of 22 peer-reviewed articles published during the period 2008-2017. The articles were included in the review if they addressed at least one of the two research questions.

Findings. Some companies choose to apply green criteria when selecting candidates while others do not. In any case, communicating a company's environmental values and orientation is worth practicing during GRS. Previous studies have identified four mediators (anticipated pride, perceived value fit, expectation of favourable treatment, perceived organisational green reputation/prestige) that intervene between signals of a company's CES and a job seeker's perceptions of organisational attractiveness. However, the strength of this effect is influenced by five moderators (pro-environmental attitude, socio-environmental consciousness, desire to have a significant impact through one's work, environmental-related standard registration, job seeker's expertise).

Value. This paper provides the first systematic review of GRS and thus paves the way for future research.

Key words: Green recruitment, systematic review, candidate attraction, job seeker

1. 3. Introduction

The last decade has seen increasing efforts by developed countries and the participation of developing countries to actively support environmental sustainability (ES). This call for action stems from the fact that ongoing environmental issues remain an obstacle to economic development and continue to harm people's lives. One example is the increase in global greenhouse gas emissions and air pollution in big cities (Dodman, 2009). These phenomena, whether caused by climate change or not, are widely considered to be the consequences of human activity. One explanation is that while the existence of manufacturing and business activities inevitably causes harm to Mother Earth, decision-making behaviours that violate environmental laws are making it worse. These non-green human behaviours lead to environmental degeneration.

To date, through industrial innovation and the improvement of environmental management systems (EMSs), these negative impacts can be reduced by eco-technology and environmental policies embedded in organisational functions and practices. Accordingly, at an organisational level, the belief is that these problems can be tackled by changing human behaviours and by adopting an EMS and embedding it into human resource management (HRM) practices in alignment with the business strategy and context, for which employees become accountable (Jackson and Seo, 2010; Zibarras and Coan, 2015). Indeed, the adoption of an EMS operates in conjunction with environmental management (EM), which is expected to go beyond the EMS certificate for the highest efficiency.

In addition, both companies and individuals are expected to demonstrate their responsibility towards natural resource protection and preservation by behaving as eco-friendly citizens while participating in corporate environmental performance – an organisational prerequisite for environmental innovativeness (Pham et al., 2019) and decarbonisation. Organisations that implement corporate environmental sustainability (CES) develop a green organisational image and are often recognised as being environmentally responsible. Having a pro-environmental workforce is vital for achieving environmental

goals since employees' pro-environmental attitudes and behaviours determine environmental performance. Employee engagement in environmental performance is, however, dependent on green HRM (GHRM), which is an alignment between EM and HRM. GHRM consists of traditional HR practices and more intangible practices that facilitate the participation of pro-environmental employees (Jabbour and Jabbour, 2016). GHRM has been empirically proven to mediate the relationship between external pressure (from customers and regulatory stakeholders) and environmental performance (Guerci et al., 2016a).

Some notable reviews have introduced the role of green employee involvement. One frequently cited review in the field is Renwick et al. (2013). Based on a systematic review of publications from 1988 to 2011 on the alignment of EM and HRM, the authors highlighted the importance of GHRM practices in attracting and developing talented staff to enhance their green abilities. These practices were found to contribute positively to both organisational performance and employee well-being. Their findings revealed an imbalance between practitioner and academic publications along with some research gaps, one of which relates to green recruitment and selection (GRS). Following the results of Renwick et al. (2013), our research questions are as follows:

- (1) *How do organisations select candidates in line with their pro-environmental stance?*
- (2) *What impact do a company's CES practices have on attracting pro-environmental job seekers?*

To answer these questions, we conducted a systematic review of the literature on GRS. The method is viable considering the rapid growth of the GHRM literature, the recurrent role given to green recruitment and the fact that a sufficient number of empirical and theoretical studies have been conducted on the subject (e.g., Turban and Greening, 1997; Greening and Turban, 2000; Jabbour and Santos, 2008; Milliman, 2013; Benn et al., 2015; Jepsen and Grob, 2015; Renwick et al., 2016; Tang et al., 2018). A number of systematic reviews have been carried out on GHRM and the intersection between environmental and economic/financial performance (Ambec and Lanoie, 2008; Tariq et al., 2016; Renwick et al., 2008; Renwick et al., 2013), but to date no study has sought to review how a company's environmental issues impact the recruitment and selection process. Furthermore, there is an

imbalance between practitioner and academic publications (Renwick et al., 2013). For example, one study by Jabbour et al. (2010) analysed the contributions of HRM throughout the stage of EM in companies in Brazil and found that by comparison with other green HR practices, those devoted to job analysis/descriptions and recruitment and selection were still lacking. As such, this systematic review of GRS is relevant to the originality of the research subject and the need to help bridge the gap between research and practice.

This paper is structured as follows. We first provide an overview of GRS. The method is then set out with a description of how the articles addressing our research questions were identified. The remainder of the paper focuses on results and discussion before concluding with the key insights.

1.4. Overview of green recruitment and selection

GRS is an emerging GHRM practice that is attracting increasing attention from researchers in the field (e.g., Bauer et al., 2012; Milliman, 2013; Jepsen and Grob, 2015). GRS is referred to as a process of recruiting and selecting candidates who are sensitive to environmental issues and willing to commit to environmental performance (Tang et al., 2018). Rooted in traditional recruitment, GRS plays a major role regardless of economic growth or recession (Morin et al., 2011). If done well, the practice facilitates the later stages after organisational entry, including green training and development and green employee involvement.

Additionally, the most advanced environmental approach is people-intensive and depends on tacit knowledge development (Del Brío et al., 2007). Considering that employers with pro-environmental credentials are able to attract talented people (Grolleau et al., 2012), GRS has to deal not only with a larger pool of candidates, but also a better pool of pro-environmental candidates from which the organisation selects the best individuals, e.g. those whom the employer believes meet the organisation's expectations. Kane (2011) assumed that "an organisation expects individuals to be motivated to do their jobs in a direction that is aligned with the organisation's objectives with sufficient vigour and to sustain this over a

period of time and in the face of obstacles”. From this point of view, employee motivation for environmental efforts appears to be the most important driver for their commitment to environmental performance. Accordingly, employee motivation is one of the main incentives since it triggers employees’ performance and is often associated with voluntary cooperation, which brings intangible benefits, such as green images of products and the creation and dissemination of knowledge (Del Brío et al., 2007). Del Brío et al. (2007) supported their hypothesis that the greater the level of employee participation and commitment to natural protection, the greater the likelihood of achieving an environmental action-based competitive advantage. Motivation for environmental protection can come from within the individual, illustrating the person’s pro-environmental attitudes and beliefs (Lülfes and Hahn, 2013), or be indirectly influenced by the manager via a range of rewards, which can be intrinsic, extrinsic and social (Kane, 2011). The existence of the two resources provides a guarantee of an employee’s organisational citizenship behaviour for the environment, the discretionary nature of which has been proven to fully mediate the relationship between strategic HRM and environmental performance (Paillé et al., 2014). Such an achievement requires the right combination of individual traits and organisational characteristics (Ciocirlan, 2017). GRS can therefore contribute to the achievement of environmental performance by helping to find and recruit the right pro-environmental candidates.

1.5. Method

This paper uses the method of Halilem (2010). To identify the relevant documents, a systematic search in three electronic databases (ISI Web of Science, EBSCO and ProQuest, as suggested by an expert librarian) was conducted, coupled with expert recommendations and snowballing – a method of tracking the list of references (Greenhalgh and Peacock, 2005). The documents are searched using keywords determined as follows:

CES and candidate attraction. At first, we assumed that organisational attraction needs to be embedded in the process of GRS with the purpose of directing the attention of potential pro-environmental job seekers to a company, obtaining their job application and,

more importantly, sustaining their positive perception of the employer and the vacant position. Next, we found corporate social performance (CSP), of which the environment is one dimension, an indicator of organisational attractiveness (Turban and Greening, 1997). Moreover, in a study by Greening and Turban (2000), the environment was found to be the third most powerful predictor for organisational attractiveness, as compared to other dimensions of CSP. Logically, we anticipated that CES is an indicator of organisational attractiveness and can therefore be a tool for, and represent, candidate attraction. The keywords to identify CES could include “environmental management”, “environmental performance”, “corporate environmental performance” and “green performance”.

GHRM and GRS. Since GRS is often examined as a dimension of GHRM in articles, “green human resource management” is included as a keyword along with “green recruitment” and “green selection”. The search chain is: {“environmental management” OR performance (environment* OR corporate OR green)} AND green (recruit* OR select*) AND “green human resource management”.

The documents are required to meet the following criteria:

- This review is electronic-based. We account only for online peer-reviewed papers devoted to the subject of GHRM.
- The year of publication of the articles ranges from 2008 to 2017.
- The articles are to be GRS-related and to address at least one of the two research questions.

A sample of 22 articles was obtained. These included two qualitative case studies, three mixed method studies, three reviews, six conceptual/theoretical papers and eight quantitative studies. The availability of all types of studies and of a sufficient number of empirical studies in developed economies (nine studies), emerging economies and in those in transition (three studies) or both (one study) demonstrates the maturity of the literature. This study excluded 2018 publications and archived documents. However, the 22 articles underwent a rigorous peer-review process by researchers with expertise in the field and received approval for publication by the academic community. Our sample is therefore representative of other publications and the results of our review are credible.

1.6. Results and discussion

1.6.1. Green criteria for selecting potential candidates

Twelve articles addressed the first question. The results show that to date, no common criteria have been applied by organisations to select pro-environmental candidates. Rather, green selection, if it does take place, involves an assessment of a candidate's environment-related skills and experience, and each employer does it their own way. Indeed, the articles suggested instructions on how to identify green candidates as well as the necessary practices that recruiters can apply to enable this process. The findings of the articles revealed various patterns of either green competencies or green selection. Table 1 provides a summary of 18 possible practices for detecting a candidate's environment-related potential, with the first five being used by some companies and the remaining eleven being recommendations made by researchers. This points to an imbalance between research and practice and therefore serves as a guide for practice.

Table 1: Recommendations for green recruitment and selection

<i>In use</i>	
1. Look for candidates who are personally committed to environmental sustainability (implemented by Aveda)	(Bauer et al., 2012)
2. Ask applicants to be environmentally responsible in the preparation of their application material (implemented by Patagonia)	(Bauer et al., 2012)
3. Include questions on the environment in the interview process to assess whether an applicant's values are congruent with the company's mission (implemented by Aveda and four Italian companies)	(Milliman, 2013; Guerci and Carollo, 2016; Masri and Jaaron, 2017)
4. In the selection process, reflect the environmental issues raised during the interview to verify the candidate's sensitivity and congruence with the company's view (three Italian companies)	(Guerci and Carollo, 2016)
5. Make environmental responsibilities and qualifications part of every job role (implemented by the Rover Group carmaker in Britain and by an Italian company)	(Ahmad, 2015; Guerci and Carollo, 2016; Obaid and Alias, 2015; Jabbour and Santos, 2008)
<i>Other recommendations by researchers</i>	
6. Forecast number and types of employees needed to implement corporate environmental management initiatives/programmes/activities	(Arulrajah, Opatha, and Nawaratne, 2015)
7. Select strategies to meet the forecasted demand for environmental work	(Arulrajah et al., 2015)
8. Consider candidate's environmental concerns and interests as selection criteria	(Arulrajah et al., 2015)
9. Verify candidates' background to check their history or environmental activities	(Sneha and Sangeetha, 2016)
10. Check the prizes and awards won to infer a candidate's natural green competencies and potential	(present paper)
11. Observe candidates' behaviour during the process to identify their pro-environmental attitudes and values	(present paper)
12. Use LinkedIn and online job portals as external sources to identify candidates and use an applicant tracking system to sort resumes and determine the best fit for the organisation	(Sneha and Sangeetha, 2016)
13. Check the candidate's claims of sustainable practices in the reference check	(Jepsen and Grob, 2015)

14. Verify acquired green competencies and attributes such as environmental knowledge, green purchase attitude and intention during selection	(Subramanian et al., 2016)
15. Select applicants who are sufficiently aware of greening	(Arulrajah et al., 2015)
16. Select applicants who have been engaging in greening as consumers under their private life domain	(Arulrajah et al., 2015)
17. Preferences could be given to candidates who are more environmentally aware or friendly or have strong motivation to keep the office and environment green or natural as it is	(Hosain and Rahman, 2016)
18. Select environmentally committed candidates who were involved in previous related green initiatives	(Masri and Jaaron, 2017)

In practice, there are two approaches: green selection and non-green selection. Some companies choose to take into consideration green competencies, whereas others do not. This notion is well illustrated in a study by Guerçi and Carollo (2016) examining the paradox with the design GHRM system perceived by organisations. Part of their intensive interviews conducted with key organisational actors in six Italian companies found that four companies designed their selection processes to support environmental performance but from different approaches. All companies were found to include environmental issues in job interviews, but only three companies chose to verify them during the selection process to check candidates' sensitivity to and congruence with the companies' views, whereas the fourth company did not. This means that the last company focuses solely on technical skills and neglects environmental sensitivity. The company added that it would focus on green technical skills exclusively for specific positions only when it is compulsory for its key role in commercial negotiations with Italian and European public administrations. This finding supports the aforementioned study by Guerçi et al. (2016a) indicating that external pressure by customers and legislative authorities can drive a company's environmental performance through the mediating role of GHRM. Furthermore, the six companies had never included environmental tasks in job descriptions (except in a commercial agreement). Hence, there were no specific environmental-related job descriptions in job advertisements either.

From a theoretical perspective, one article (Subramanian et al., 2016) introduced green competencies closely associated with personal competencies. The study assumed that green competencies comprise natural green competencies derived from an individual's own observations, the mentoring received by an individual from his or her parents, relatives and friends, and the acquired green competencies that are the environment-related knowledge and skills accumulated through the individual's past experiences. Based on this

conceptualisation, natural competencies cannot be said to be isolated from the underlying traits and personality of the individual since they also reflect the person's attitudes, norms and beliefs towards environmental issues. In relation to this, natural green competencies derive to a greater or lesser extent from the individual's infancy and include the individual's aptitude. In such a case, it is more difficult to measure and evaluate a candidate's environmental abilities. For example, Tang et al. (2018) suggested that green awareness involving personal factors, such as green consciousness, green conscientiousness and green agreeableness, should be considered during green selection. Given that these competencies are rooted in personality traits, it seems possible for environment-related issues to be embedded in a personality test to facilitate the evaluation of green patterns. However, no evidence is available to indicate that this has ever been used in practice.

Indeed, recruiters can evaluate natural green competencies indirectly by including questions on environmental issues in interviews for the purpose of exploring a candidate's viewpoints on certain matters, or they can study the candidate's background, history, prizes and awards won for eco-initiatives/solutions. To verify the green competencies acquired by individuals, Subramanian et al. (2016) recommended that recruiters examine job applicants' attributes by assessing, for example, environmental knowledge, green purchasing attitudes and intention. To identify the right pro-environmental candidates, GRS should also include green job design and green job planning (Arulrajah et al., 2015; Masri and Jaaron, 2017) to ensure that the ecological values of candidates are compatible with those of the employer. This notion conforms to the recruitment literature to the extent that person-organisation fit is among the predictors of applicant attraction (Morin et al., 2011; Uggerslev et al., 2012). Accordingly, if candidates have the same perception about ecological value fit as the organisation, this will probably increase their job acceptance behaviour, job pursuit behaviour and job satisfaction after organisational entry. Furthermore, good ecological values are important because they can be generalised after organisational entry and subsequently shape individuals' workplace pro-environmental behaviours. In this respect, individual-level behaviour is likely to be influenced by workplace peers, being governed by informational or normative forces (Morrison and Lawell, 2016). By this mechanism, positive

ecological values can be adopted and become widespread within the workplace and even outside the organisational boundaries. Second, individuals are both employees at work and consumers at home, and the consistency of their pro-environmental behaviours is a guarantee for the continuity of greenness. Therefore, it is valuable that candidates demonstrate a personal commitment to ES in addition to eco-mindedness and sensitivity.

In sum, green selection is a process of identifying, evaluating and verifying (where necessary) candidates' eco-mindedness, ecological values and sensitivity to environment-related issues. Candidates' green credentials should account for a significant proportion of the overall evaluation of their job suitability.

1.6.2. Company CES practices for job seekers' perceptions of organisational attractiveness: What are the mediators/moderators?

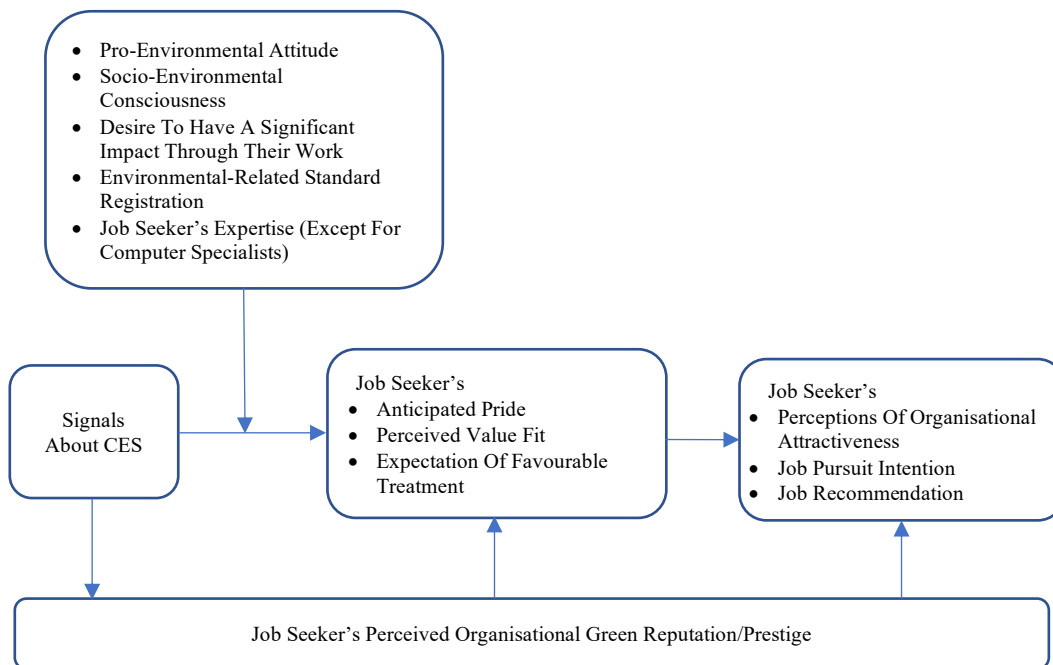
Eleven articles were identified as addressing the second question, including eight quantitative studies, one mixed method study, one review and one conceptual paper. The empirical results provided conclusions about mediators and moderators (Table 2). Meanwhile, the conceptual/theoretical and review papers reinforce these findings.

Table 2: Mediators and moderators for the relationship between CES and applicant attraction outcomes

<i>Mediators</i>	
1. Job seeker's perceived organisational green reputation/prestige	(Behrend et al., 2009; Jones et al., 2014)
2. Job seeker's anticipated pride	(Jones et al., 2014, 2016)
3. Job seeker's perceived value fit/Person–organisation fit	(Gully et al., 2013; Jones et al., 2014, 2016)
4. Job seeker's expectation of favourable employee treatment	(Jones et al., 2014; 2016)
<i>Moderators</i>	
5. Job seeker's socio-environmental consciousness	(Lin et al., 2014)
6. Job seeker's pro-environmental attitude	(Jones et al., 2014)
7. Job seeker's desire to have a significant impact through their work-DSIW	(Gully et al., 2013)
8. Environmental-related standard registration	(Grolleau et al., 2012)
9. Job seeker's expertise other than computer knowledge	(Grolleau et al., 2012)

Generally, the articles concluded that it is worth implementing CES (used interchangeably with corporate environmental responsibility, corporate environmental performance or the environmental dimension of corporate social responsibility). Additionally, performing CES practices is beneficial to the company in both gaining a green reputation, which is closely associated with green prestige, and in attracting prospective pro-environmental job seekers. These practices are positively linked to candidates' perceptions of organisational attractiveness and other applicant attraction outcomes. This finding is consistent with the prior literature (Greening and Turban, 2000; Turban and Greening, 1997). However, the contemporary literature extends the earliest studies in the field to the extent that it moves towards a more pro-environmental stance and takes into account participants' ecological values. The core finding is that in order to generate perceived organisational attractiveness, which was recently found to lead to job pursuit intention in a study by Chaudhary (2019), the organisation's ecological values and green practices must be successfully communicated to pro-environmental job seekers (Lis, 2012). The correlations between these concepts are illustrated in figure 1 below.

Figure 1: Mediating and moderating mechanisms between signals about CES and applicant attraction outcomes



1.6.2.1. Mediating mechanisms

Among a range of drivers, organisational green reputation appeared to be the most widely recognised influencing factor both shaping a candidate's perception of organisational green prestige and influencing other mediators. Ambec and Lanoie (2008, p. 57) noted that "no one wants to work for a dodgy company and the brightest people obviously have a choice," while Bauer et al. (2012, p.5) stated that « negative images will threaten the individual image, may bring unfavourable comments from friends and family, and may depress the person ». By contrast, when the organisation has a strong green image, it is recognised and well known as an environmentally responsible citizen. The organisation will gain the trust of the community. That is why green reputation is often examined interchangeably with organisational green prestige. Both existing and potential employees will feel proud to be a part of such an organisation (Behrend et al., 2009) because affiliation with the organisation will enhance their self-esteem, their identification with the organisation (Dögl and Holtbrügge, 2014) and their self-concept (Behrend et al., 2009). This notion is rooted in social identity theory, which posits that part of a person's self-concept comes from the groups to which he or she belongs. Therefore, people tend to categorise themselves into groups which they believe to be similar to them. This assumption explains a person's desire and motivation to be part of an organisation to the extent that his or her self-image will be aligned with the image of the organisation. Two possible reasons for this tendency are that the person finds a congruence/fit between organisational values and his or her own values and believes that being a part of that organisation may enhance his or her self-concept.

Given the presumption that applicant attraction during GRS depends on the successful communication of the organisation's socio-environmental values, some authors have argued that including this information in recruitment messages/advertisements or signalling them on the company's website helps to foster a perception of green reputation among candidates (Behrend et al., 2009). Moreover, these signals increase job seekers' perceived value fit with the organisation (Gully et al., 2013; Jones et al., 2014, 2016), anticipated pride (Jones et al., 2014, 2016) and job seekers' expectations of favourable

employee treatment (Jones et al., 2014; 2016), which all contribute to fostering positive perceptions of organisational attractiveness among candidates. Generally speaking, the studies confirmed the four mediations, supporting the effect of pro-environmental recruitment messages and recruitment websites. However, another study by Guerci et al. (2016b) examined the effect of applicant attraction and found evidence of the impact of green reputation on attracting applicants but no support for the impact of green information on recruitment websites. Guerci et al. (2016b) speculated that participants may acquire information about a company from sources other than the company's website because such sources may be more independent and thus more trustworthy, whereas a wide range of green information supplied by the company itself has the potential for greenwashing, which is a product of green public relations and marketing or simply an exaggeration of what has in fact been implemented. Therefore, it may be concluded that it is worth signalling green issues to attract prospective employees; nevertheless, various signalling channels may differ in their effectiveness, and job seekers may differ in their preferences for a signalling method. Signalling theory posits that job seekers often try to detect organisational characteristics and job characteristics, but that they lack related information or evidence. They will use whatever information they have to make their inferences. Therefore, it is all about the job seeker's interpretations, which determine his or her perception of organisational attractiveness. For example, Jones et al. (2014, 2016) assumed that participants' perceived value fit was derived from their inferences about organisational values; meanwhile, their anticipated pride relates to their inferences about organisational prestige, while their expectation of favourable employee treatment comes from their perception of organisational prosocial orientation. Overall, both studies confirmed the three mediating mechanisms. Jones et al. (2016) found only limited support for anticipated pride; this may be due to the fact that five participants referred to the two open-ended questions in the manipulation check, i.e. that "the company cares deeply about its image" and "they want to be well respected in the community and want their employees to care about the community" (p.7).

Since it must be the applicant's interpretation of signals and perceptions that determine the effectiveness of signalling during GRS, signal-based mechanisms are most

suitable for explaining job seekers' perceptions of organisational attractiveness. From a need-supply perspective, candidates prefer an employer that can fulfil their needs. Accordingly, the literature to date on HRM takes into account the socio-emotional needs of employees. This is why GRS should be a process of signalling on a wide range of organisational environmental capabilities so that job seekers are able to infer what it would be like to work for a given employer. In this regard, job seekers would infer that working for this employer would fulfil their environment-related needs and that if the employer treats current employees/society well, they would also treat them well. However, if they perceive incompatibility with the organisation's ecological values or a conflict in ecological attitudes, this may reduce their interest in other attractions. Furthermore, cognitive dissonance may sometimes appear if they experience an inconsistency between two components of attitudes towards environmental protection (Ciocirlan, 2017). Such individuals would prefer the employer to reduce the employer's cognitive dissonance by, for example, reducing the conflicts between employees' preferences and citizens' preferences (Grolleau et al., 2012). This explains why there is mixed support in the literature for a perceived value-fit mechanism, especially in studies that use individual differences in pro-environmental attitudes. This mechanism was supported in studies by Gully et al. (2013) and Jones et al. (2014, 2016), but not supported in others (Behrend et al., 2009; Greening and Turban, 2000). To further explain the mechanism, organisational ecological values reflect the employer's traits, goals and orientation towards the environment. To a certain extent, a company adopts CES or an environmental standard to suit its own purposes, which may or may not be in alignment with various peer expectations. Its values attract potential pro-environmental employees in the same way. In that person-organisation fit facilitates job satisfaction and employee commitment, which reduces the intention to quit (Morin et al., 2011), perceived value fit is therefore an essential predictor and should be the most expected result for green employment. A pro-environmental attitude is accordingly an important positive moderator.

Moreover, to encourage candidates' participation, GRS should be a process of activating their identities by sending signals on organisational values (Banks et al., 2016). Because some environmental identity is not always recognised by them until it is activated,

communicating about what the employer values in life, as well as what it actually does for environmental sustainability, will stimulate the job seeker, generating self-identification with the organisation. Support for this argument can be found in an earlier study by Bauer and Aiman-Smith (1996), which suggested that a positive environmental stance articulated via a recruiting brochure positively affects job seekers even when they do not see themselves as being particularly pro-environmental.

1.6.2.2. Moderating mechanisms

Three positive moderators identified are the candidate's socio-environmental consciousness (Lin et al., 2014), pro-environmental attitude (Jones et al., 2014) and desire to have a significant impact through his or her work – a preference to do work that has a substantial influence on society and on the lives of others (Gully et al., 2013). The effect of the relationship under examination was found to be stronger among those of a higher/stronger consciousness/attitude/desire. These moderators are indicators of individual self-identities, where there is an intercorrelation between care for nature/the environment and care for the lives of others/society. From a social identity theory perspective, this is logical since a person can have multiple self-concepts and multiple identities, which may be personal, relational or collective and potentially coexist simultaneously (Banks et al., 2016). This explains the following relationship in terms of the effect on the same organisational characteristics: the greater the compatibility of values, the more a participant is attracted to an employer. Even within an in-group, there can at times be conflicts because each member may view a given circumstance differently, value the group role differently or pursue the group goal for different individual purposes. Consequently, there are cases where care for the environment and care for the lives of others do not overlap. In other words, each person values the environment in a different way. For example, Bauer et al. (2012) stated that:

Employee ecological orientation has four dimensions. Egocentric individuals are those who are dedicated to sustainability because they enjoy nature. Ecocentric individuals care about the environment for its own sake. Anthropocentric individuals believe that nature serves humans and therefore it needs to be protected. Environmentally apathetic individuals tend to believe that environmental concerns have been exaggerated (p.7).

The other two moderators found are candidate's expertise, except for computer specialists, and environmental-related standard registration (Grolleau et al., 2012). However, these moderators affect the relationship under study differently, such that the greater the increase in the moderators, the smaller the probability of perceived organisational attractiveness. Grolleau et al. (2012) hypothesised that environmental-related standards improve companies' recruitment. In contrast to other studies, this study investigated a sample of 13,790 private firms in France, focusing on the difficulties they may have encountered in recruiting professional employees other than computer specialists and non-professionals when they had registered for environmental standards. The independent variables were standards and the dependent variables were difficulties. The results lead to two conclusions.

First, there was less support for the hypothesis in the case of professionals compared to non-professionals. According to Grolleau et al. (2012), this may indicate that professional participants, who are well educated, pay less attention to environmental standards and may suspect manipulation or believe that the firm has disingenuous motives. From a signal-based perspective, Jones et al. (2014) explained that the strength of signals in a recruitment context depends on the extent to which job seekers already possess the related knowledge/information. Hence, one possible relating moderator may be job seekers' experience. The more likely it is that job seekers have already experienced the context, the less likely they are to be attracted to the signalling.

Second, the study tested the average difference in the probability that a firm improves its recruitment when it is registered under an environmental standard compared to when it is not. Surprisingly, the results indicated that the unobservable factors that increase the probability of environmental-related standard registration decrease recruitment propensity among both professionals and non-professionals. The authors argued that this may be due to applicants' fear of pollution. They tend to interpret this as meaning that if a firm is located in an industrial area, it is more likely to adopt environmental standards for dealing with environmental problems. This hypothesis addresses the effect of job seekers' interpretations and perceptions that determine their levels of attraction outcomes. Additionally, it raises the

question of whether the location would impact other applicant attraction outcomes, such as job acceptance behaviour.

Further to the above, assuming that prospective pro-environmental candidates are identified, there may be other moderators which affect their intention to pursue employment or accept a job offer, not to mention green signals that are not always attractive to green individuals. In practice, GRS involves many interactions, and participants may perceive a given signal negatively at one point or another. This may threaten their pre-existing positive perceptions or intention to stay. For example, job seekers may perceive disingenuous motives behind an employer's environmental standard registration/orientation (Jones et al., 2014), greenwashing or concealment of reality behind public relations (Lis, 2012). This raises the question of whether it is always good to manipulate signals about a company's environmental policy and practices. Also, how can pro-environmental job seekers be helped to correctly interpret those signals and believe in the employer's underlying quality? What is the principle in attracting pro-environmental job seekers?

1.7. Conclusion

This review provides some key insights. First, both a pro-environmental employer and a pro-environmental job seeker look for the option that matches the other party's environmental needs. Ecological value fit is important not only for securing employment but also for enhancing the employee's job satisfaction and employee retention after organisational entry. Therefore, an effective GRS is one that takes into consideration the participant's pro-environmental attitudes and socio-environmental needs and enables an open conversation between the recruiter and the participant to facilitate green selection. This also increases employee willingness to engage in environmental performance.

Second, even the employer, i.e. the more powerful party, has incomplete information about job seekers. When a job seeker is resistant to information sharing or manipulates information to adapt to the green selection process in a competition, it is harder for the employer to evaluate the candidate's pro-environmental characteristics and qualifications.

As such, we assume, on the one hand, that GRS aims to ensure participants comfortably disclose their pro-environmental attitudes/characteristics and, on the other, that it involves a tactical process of detection and verification of ecological values.

Third, GRS targets multiple outcomes, including a job seeker's perception of organisational attractiveness, job pursuit intention, job acceptance and job recommendation. Candidate attraction should convey the employer's pro-environmental messages and should be maintained during the process to gain the participant's trust in the employer's ecological values, prestige and job prospects and to retain suitable candidates. A code of conduct associated with a principle of attracting practices is therefore essential and needs to be discovered for an application.

The findings of this review contribute to the consulting and HR professions by offering the following guidelines for practice. First, practitioners can adopt 18 suggestions by researchers (Table 1), some of which are currently in use in companies. Their application will help HR managers/head hunters to detect and pursue prospective pro-environmental employees. Second, by understanding GRS as a process of activating a job seeker's environmental self-identification and perception of value congruence with the organisation, HR specialists could adopt appropriate signalling channels and methods for communicating organisational ecological values and orientation in a way that disengages job seekers' perceptions of disingenuous motives or greenwashing. Importantly, HR specialists/interviewers should "walk the talk" (Milliman, 2013). Because they are considered to be representative of the employer, the pro-environmental attitudes and behaviours they demonstrate during their interactions and communication with candidates/interviewees will be perceived as a reflection of the employer's ecological values, which may create a green image and positively impress job applicants. Applicable practices could include, for example, organising all HR activities associated with a green vision and mission (Sneha and Sangeetha, 2016) and using initial virtual employment screening as well as LinkedIn and online job portals (Milliman, 2013; Sneha and Sangeetha, 2016).

Chapter 2

MANAGING GREEN RECRUITMENT FOR ATTRACTING PRO-ENVIRONMENTAL JOB SEEKERS: TOWARD A CONCEPTUAL MODEL OF « HANDICAP » PRINCIPLE

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2.1. Résumé

En nous appuyant sur la théorie du signal, ce chapitre vise à évaluer l'effet positif du fait pour une entreprise de signaler sa performance environnementale (*corporate environmental performance* en anglais, ou CEP) durant le processus de recrutement écologique sur les perceptions qu'ont les demandeurs d'emploi de l'attractivité écologique d'une organisation. A travers une revue de la littérature sur la gestion écologique des ressources humaines et des études empiriques menées dans ce domaine, ce chapitre vise donc à mieux comprendre le rôle des employés dans la performance environnementale, identifiant ainsi différents types de comportements pro-environnementaux. Le recrutement écologique s'avère essentiel pour fidéliser et maintenir dans la durée une main d'œuvre suffisante en quantité et en qualité. Le concept renvoie au processus de recrutement, d'attraction et de sélection de candidats qualifiés conscients de la durabilité environnementale et prêts à s'engager pour optimiser la performance environnementale. Adaptant les mécanismes de signalisation décrits par Jones, Willness et Madey (2014) et le concept de la performance environnementale en entreprise développé par Trumpp, Endrikat, Zopf et Guenther (2015), nous proposons un modèle conceptuel qui démontre que les signaux relatifs à la CEP, sous la forme de la performance en termes de gestion environnementale et de pratiques environnementales, sont positivement corrélés avec l'attractivité environnementale perçue par les demandeurs d'emploi via le prestige organisationnel perçu/la fierté anticipée, la perception de concordance de valeurs et la perception de traitement favorable. Nous proposons également deux nouveaux concepts, à savoir l'honnêteté de signalisation telle que perçue par les employés et la cohérence de signalisation telle que perçue par les employés, dont l'effet est de renforcer les mécanismes d'attraction. La valeur de ce modèle est double. Premièrement, il démontre la validité d'une approche de la CEP qui prend compte des employés et la réalisation des objectifs environnementaux. Deuxièmement, une signalisation honnête autour de la CEP durant le processus de recrutement est une pratique bénéfique pour attirer des candidats, dont les effets positifs sur le recrutement sont multiples, y compris l'intention de poursuivre le recrutement, l'acceptation d'une offre d'emploi et l'intention de recommander une entreprise. Nous examinerons ensuite les apports théoriques et les implications pratiques.

Mots clés : Performance environnementale en entreprise, durabilité environnementale, recrutement écologique, signalisation honnête, demandeur d'emploi, attractivité organisationnelle, mécanismes de signalisation.

2.2. Abstract

Using signalling theory, this chapter aims to explore how signalling corporate environmental performance (CEP) during green recruitment has a positive effect on job seekers' perceptions of organisational attractiveness for environment. By reviewing literature on green human resource management practices and empirical studies, this chapter addresses the role of employee participation in environmental performance, displaying various kinds of pro-environmental behaviours. Accordingly, green recruitment is vital to securing and sustaining

both quantity and quality in the workforce. This concept refers to a process of headhunting, stimulating, and selecting qualified candidates who are sensitive to environmental sustainability and are willing to commit to environmental performance. Adapting the signal-based mechanisms by Jones, Willness and Madey (2014) and the CEP construct by Trumpp, Endrikat, Zopf and Guenther (2015), we propose a conceptual model which demonstrates that signals about CEP – in the form of environmental management performance and environmental operation performance – are positively linked to job seekers' perceived organisational attractiveness for environment via perceived organisational prestige/anticipated pride, perceived value fit and perceived favourable treatment. Also, we propose two new concepts – perceived signal honesty and perceived signal consistency – which reinforce the attracting mechanisms. The value of this model is twofold. First, it displays the validity of CEP that takes into account employees and the implementation level of environmental goals. Second, honest signalling about CEP during recruitment is worth practising for candidate attraction, which leads to multiple recruitment outcomes, such as job pursuit intention, job acceptance and job recommendations. Theoretical contributions and practical implications will be presented.

Keywords: Corporate environmental performance, environmental sustainability, green recruitment, honest signalling, job seeker, organisational attraction, signal-based mechanisms

2.3. Introduction

Sustainability has long been defined as simultaneously pursuing economic, social, and environmental goals – the so-called “triple-bottom line” (TBL) in which the environmental bottom line enables the regenerative capability of an ecosystem (Rogers and Hudson, 2011; Bauer et al., 2012). However, TBL has been argued to be inadequate for organisational contributions to sustaining the Earth’s ecology (Milne and Gray, 2011). The conceptualisation of the TBL is rather rhetorical, as the equal achievement of the three goals is impossible, not to mention that it is unable to measure this TBL construct (Norman and MacDonald, 2004; Milne and Gray, 2013). As such, this paper emphasises the environmental sustainability (ES) goals and practices not exclusively to enable organisations to contribute to the regeneration of the ecosystem and natural protection, but also to improve organisational outcomes.

Scholars have pointed out that pursuing ES does not affect a company’s economic development, but rather brings benefits that improve both economic and non-financial performance, including organisational performance, organisational reputation, and competitive advantages (Greening and Turban, 2000; Del Brio et al., 2007; Gully et al., 2013). On the one hand, the implementation of environmental management systems (EMS) helps reduce operational costs and charges in ways that ensure efficient consumption of energy, materials, and resources, minimising negative environmental impacts and leading to positive financial outcomes (Jabbour, and Santos, 2008). Relatedly, green innovation of products and services allows organisations to create eco-friendly image and to gain agreement from customers. On the other hand, corporate environmental sustainability in management and operation contributes to organisational attractiveness, as it fulfils both instrumental, socio-emotional, and psychological needs of employees, especially those who care for natural protection and desire to have a significant impact through their work (Grolleau et al., 2012; Gully et al., 2013; Dögl and Holtbrügge, 2014).

In the context of corporate greening, strategic human resource management (SHRM) is aimed to improve organisational performance consistent with environmental goals. Hence, the greening of SHRM results in green human resource management (GHRM), responding to the needs of an organisation regarding socio-environmental aspects. This intersection has been studied for years by scholars of human resource management (HRM); however, the concept of GHRM emerged and became broadly studied at a more proactive level in 2008. GHRM involves both traditional human resource (HR) practices and the more intangible ones, such as organisational culture, organisational learning, teamwork, and employee empowerment, in alignment with environmental goals (Jackson et al., 2011; Renwick et al., 2013; Jabbour and Jabbour, 2016). GHRM is designed to improve organisational resources and capabilities vis-à-vis environmental sustainability as well as to establish shared ecological organisational value and shared eco-knowledge among members of the organisation. Successful implementation of GHRM requires the involvement of entire staff, rather than exclusively managers and specialists (Renwick et al., 2013). As such, green HR practices are designed with the purpose of motivating employees to participate in environmental operation and environmental management (EM) through which they introduce ecological concerns and make suggestions for environmental improvement, facilitating the spread of ethical values throughout the organisation (Jabbour and Santos, 2008; Renwick et al., 2013; Haddock-Millar et al., 2016). This leads to the necessity of recruiting eco-minded employees who will contribute to the achievement of ES goals. Among the antecedents of organisational attractiveness for environment, CEP is an indicator of environmentally responsible employer. The purpose of this chapter is to explore how signalling CEP has a positive effect on job seekers' perceptions of organisational attractiveness. The objective of this chapter is threefold. First, literature and recent empirical studies on GHRM will be reviewed to highlight the importance of employee involvement in the implementation of organisations' environmental performance. Second, this chapter uses signalling theory to explore how to form job seekers' perceptions of organisational attractiveness in green recruitment process. Third, a conceptual model is to be built to contribute new insights into the attracting mechanisms.

This chapter is organised as follows. We first review literature on employee participation in environmental performance to address the importance of pro-environmental workforce, through which individual eco-mindedness and environmental identity will be highlighted. Green recruitment practices are then discussed through the lens of signalling theory with an emphasis on attracting pro-environmental job seekers at the very beginning episodes. Next, the effect of signalling CEP before and during green recruitment will be analysed by signal-based mechanisms. A conceptual model associated with our ten propositions will both give an insight into attracting mechanisms and shed light on the « Handicap » principle for attracting pro-environmental ones. Finally, theoretical contributions, practical implications and suggestions for future research will be presented in our conclusion.

2.4. Theoretical background

2.4.1. The role of pro-environmental employees and their participation in environmental performance

Pro-environmental employees (also called eco-friendly employees or green employees), in the form of fully skilled employees and talented managers, could be a source of the firm's sustainable competitive advantage when they are valuable, rare, imperfectly imitable and non-substitutable (Del Brío et al., 2007). The resource-based theory views each individual as a link to a number of resources, including capabilities, explicit and tacit knowledge, good values and social capital, which can be a valued intangible asset that the organisation uses to implement their strategies (Kozlenkova et al., 2014). From this view, the pro-environmental workforce and their participation in the firm's environmental performance is deemed crucial to the implementation of environmental goals. A pro-environmental workforce should be therefore understood to comprise of talented executives and managers, skilled employees and workers who have ecological values, environmental identity, and are willing to commit to environmental performance. However, pro-environmental employees and their resources are valuable only if they are deployable in the workplace. Accordingly, their positive instrumental and psychological participations

determine the implementation of environmental performance. Meanwhile, their motivation for environment can trigger their pro-environmental behaviours at work, which is considered a value-added to the organisation.

2.4.1.1. Management role in environmental performance

Depending on the firm size and organisational structure, each company has different managing positions, differentiating among the leader, executive, middle-manager, supervisor or senior employee. These ones seem to resemble each other in their nature of management role. In this section, those positions are syncretised to be manager. Practically speaking, managers are the gatekeepers to environmental performance (Zibarras and Coan, 2015) because they are the ones who translate the environmental strategies into smaller goals and action plans, assigning green tasks to their followers, monitoring, supporting and motivating employee participation. More importantly, a pro-environmental manager is a good mirror for the followers. First, the manager is often seen as the representative of the organisation and thus, this one is a source of information that links to the appropriate behaviours (Kim et al., 2017). Consequently, managers' pro-environmental behaviours, the in-role or discretionary ones, can directly or indirectly influence the pro-environmental behaviours of the subordinates. Second, manager's pro-environmental behaviours carry their values (Renwick et al., 2013; Kim et al., 2017) and in some cases, their personal values, rather than a widely applied rule, determine their green leadership behaviour and decision-making process (Renwick et al., 2013). In this regard, one quantitative study by Robertson and Barling (2013) found that leaders' green descriptive norms predicted their green transformational leadership and pro-environmental behaviours, which later predicted employees' harmonious passion for environment. Interestingly, this finding led to the authors' assumption that what the leaders' friend and family do could spill over to the organisational context. Third, besides their model role, the pro-environmental managers act as the motivator for employees' pro-environmental behaviours (Robertson and Barling, 2013; Zibarras and Coan, 2015). When employees feel inspired, psychologically empowered and experience a positive emotion derived from supervisor's/organisation's support, they will exert themselves to try to perform the expected

workplace pro-environmental behaviours. In sum, those findings underlie the importance of the transformational style of the managers in shaping and driving an employee's workplace pro-environmental behaviours. The main purpose is to develop specific organisational pro-environmental behaviours and ecological values that carry the norms, belief and attitudes toward the environment.

2.4.1.2. Employee participation in environmental performance

While environmental strategies aim at environmental performance, GHRM practices aim at the participation of pro-environmental employees. Employee participation is demonstrated by the exhibition of pro-environmental behaviours (the so-called green behaviours), of which individual pro-environmental attitude, norm and perceived behavioural control (the so-called organisational affects) are important predictors (Lülfes and Hahn, 2013).

Since a pro-environmental employee is also a private citizen, his/her attitudes and values influence work attitude and behaviour and vice versa (Ciocirlan, 2017). Employee's pro-environmental attitudes reflect his/her belief toward ES issues. As such, the attitudes refer to the employee's overall assessment of the advantages and disadvantages of performing a given behaviour (Lülfes and Hahn, 2013), for example, an eco-minded employee often weighs the consequences of a given behaviour for preventing its negative impact on the environment. As proposed by the theory of reasoned action and theory of planned behaviour (TPB) (Ajzen, 1991), individual attitude, subjective norms that derive from social norm/normative beliefs, and perceived behavioural control are the three components in the prediction for individual behavioural intention. However, these theories have their limit in explaining relationship between behavioural intention and individual's real behaviour. Moreover, a gap exists in the prediction for the actual behaviour by personal norm. Personal norm, though also derived from and influenced by social norm, reflects one's self-concept, meaning the expectation that people hold for themselves. In this regard, personal norm embeds in it the individual's interests, characteristics and history. There are several

contemporary scholars who are in support of this point of view and developed the predictors that extend the TPB model.

Lülfes and Hahn (2013) proposed a model for predicting employee's voluntary pro-environmental behaviour of which the three predictors are attitude, perceived behavioural control and personal moral norm which derive from individual awareness and social norm. Importantly, the authors assumed such behaviour to be determined by personal predispositions; hence, it is rational and purposive depending on: (1) employee's awareness of the need to proceed the action for problem-solving in a given situation, (2) his/her awareness of the consequences and (3) the extent to which he/she believes in his/her ability to engage in the action. Likewise, their model proposes individual habit as moderator between intention and behaviour, the authors assumed that habits at work would be able to change because they are generated by successfully performing stable behaviours in stable situations. Eventually, self-efficacy and self-esteem form an employee's attitude toward his/her engagement in a pro-environmental behaviour. It can be concluded that when personal tacit knowledge and capabilities toward an environmental issue are strong, the effect of employee's awareness is higher than that of social norm in predicting for the personal norm.

Similarly, the results of a quantitative study by Chou (2014) implicated that personal environmental norm is more powerful than individual environmental beliefs in predicting for the employee's pro-environmental behaviour. Additionally, employees with more positive pro-environmental attitude and higher personal environmental norm tend to consistently engage in pro-environmental behaviours, regardless of weak green organisational climate (Chou, 2014) or their level of experienced positive daily affect, which is the individual's emotional experiences about any target they may encounter in the day (Bissing-Olson et al., 2013). Another quantitative study by Dumont et al. (2017) also indicated that individual values moderate the effect of psychological green climate on extra-role green behaviour. These research findings lead to the conclusion that there should be a compatibility between individual values and organisational values as well as the compatibility between personal environmental norm and perceived environmental behavioural control for the highest positive workplace outcomes.

There are a number of ways that employees can engage in acting for ES at work, exhibiting various kinds of pro-environmental behaviours. Accordingly, firms must be able to rely on their employees for both hands-on practices (Paillé et al., 2014) and hands-off practices such as environmental problem prevention, energy and material saving, waste reduction, cleaner production, green workplace, etc. Moreover, pro-environmental employees differentiate from low-intensive to high-intensive depending on the level of the individual's environmental values and environmental identity. In the organisational setting, Ciocirlan (2017) has refined such kind of behaviours, namely environmental workplace behaviour, to be comprised of organisational citizenship behaviour for environment (OCBE), environmental in-role behaviours and environmental counterproductive workplace behaviour (ECWB). This paper exceeds the previous research in the degree to which it accounts for the ECWBs and the situations when the environmental values of employee are stronger than that of the organisation. ECWB is assumed to not always be unexpected or unethical, as environmental workplace behaviours may overlap with ECWBs including, for example, the silent behaviour, disobeying behaviour to order or speak out behaviour of employees to oppose certain rule/policy/behaviour that they perceive as harmful to the environment. Besides, ECWB is, at times, associated with higher risk-taking behaviour, higher creativity, higher self-confidence, higher liberty, less normative behaviour or power-influencing behaviour.

OCBE, often known as the extra-role behaviour, is the most recently researched in field. What makes OCBE differentiate from the voluntary pro-environmental behaviour, which is studied by Lülfs and Hahn (2013), is that it can not be coerced by contractual terms or punishment, it is more discretionary and based on rational choice. An example of this kind of behaviour is helping behaviour so that it is associated with the prosocial ones which are for the welfare of others. In the one part, individual positive environmental values and OCBE will be generalised within the workplace and construct the collective OCBE which refers to « the perception of what is considered the standard mode of behaviour in the unit with regard to environmental matters » (Pinzone et al., 2016, p.202). In the other part, OCBEs facilitate the effectiveness of EM and environmental improvement and thus, are highly appreciated by

organisations. First, the participation of employees in environmental initiatives is theoretically and empirically proved to be positively associated with higher engagement with the organisation, organisational performance and job satisfaction, which are negatively related to intention to quit (Benn et al., 2015; Renwick et al., 2016). Second, socialisation, altruism and helping among organisational members increase firm performance (Bruque et al., 2016). In this respect, the social network that enhances individual performance is not exclusively built by a single, dyadic relationship, or leader-member exchange relationship, but also on a broader framework, where the person receives both internal and external supports. The study by Bruque et al. (2016) surveyed 371 employees working at 133 different branches of a large financial firm in Spain in the context that the firm made a major change to its Information System. Results indicated that supportive social ties had a positive effect on individual's organisational citizenship behaviour, which was directly associated with individual task performance and adaptation to change. As such, it can be concluded that OCBs and individual environmental identities, which reflect their social network, are crucial to the successful implementation of environmental activities and thus highly appreciated by an organisation, especially when it goes through a difficult time or an organisational change.

2.4.2. Green recruitment through the lens of signalling theory

2.4.2.1. Overview on organisational attraction in green recruitment

Given the importance of the enduring participation of pro-environmental employees in environmental performance and the spread of ecological values within the organisation, green recruitment plays a foremost role in attracting and recruiting pro-environmental job seekers. Green recruitment is referred to as a process of headhunting, stimulating, recruiting and selecting candidates who are sensitive to ES and willing to commit to environmental issues (Jabbour and Santos, 2008; Tang et al., 2018). A body of works that have made a great contribution on this field includes Uggerslev et al. (2012), Gully et al. (2013), Milliman (2013), Jepsen and Grob (2015), etc. The recruiting practices involve green employer branding, which refers to organisational prestige related to EM and can be formed through

GHRM practices, while the selecting process deals with a series of tests, interviews and candidate evaluations based on green criteria (Jabbour and Santos, 2008; Tang et al., 2018). It is therefore crucial that organisational attraction practices are embedded in green recruitment process to attract and sustain the interest of pro-environmental candidates toward the organisation and the job vacancy, especially in the « war for talent ». In assuming that job seekers' first impression on employer influences their interest in later stages of green recruitment, in this chapter, we highlight the organisational attraction practices at the initial stages for attracting and generating prospective pro-environmental applicants.

Organisational attraction is referred to as affective and attitudinal positive thoughts of job seekers or participants about an organisation as potential employers (Gully et al., 2013). Hence, organisational attraction practices concern the organisation's capacity to attract its job seekers (Renaud et al., 2016) and then to become an employer-of-choice to prospective applicants. For the highest effectiveness, an organisation needs prerequisite capabilities to provide prospective job seekers good offers. A study by Renaud et al. (2016) using a “policy-capturing” approach investigated on the effect of symbolic organisational attributes and instrumental organisational attributes on applicant attraction and found that the symbolic had the strongest effect. Such that, the participants who rated in a scenario of “ethic is important for the organisation” reported a higher level of attraction than those who rated in the scenario of “ethic is not important for the organisation”. The findings confirmed the combined effect of instrumental and symbolic organisational attributes on applicant attraction, suggesting a firm to create a total reward program and code of ethics. Given that environmentalism is a sub-set of business ethics, implementing ES and having ecological values are worthy to attract eco-minded job seekers. Implementing ES practices signals that the company is not only responsible for its operation but also for the society and its stakeholders, making the organisation attractive to customers and potential employees. Among the corporate sustainability practices adopted by companies, CEP and its sisters—corporate social performance (CSP) and corporate social responsibility are frequently studied in relation with organisational attraction, and are found to be indicators of organisational attractiveness (Turban and Greening, 1997; Greening and Turban, 2000; Backhaus et al.,

2002; Willness and Jones, 2013; Tsai et al., 2014). The intersection of the three constructs addresses the environmental issues, representing the harmony between economic, social and environmental sustainability goals of development. CEP differentiates from CSP and corporate social responsibility in the extent that it necessarily aims at ES goal. CSP encompasses a firm's self-regulation codes, standards, ethics and norms that are integrated into the business and organisational model (Tsai et al., 2014), so does CEP.

CEP has long been studied and often used interchangeably with corporate environmental sustainability or corporate environmental responsibility; however, we contend that Trumpp et al. (2015) provided a most complete conceptualisation which relies on ISO definitions. CEP is assumed to focus on both EM activities and the outcomes of these activities and processes. Accordingly, Trumpp et al. (2015) defined CEP as a multidimensional aggregate construct which is comprised of at least two dimensions, namely environmental management performance (EMP) and environmental operation performance (EOP). While EMP encompasses the EM activities and refers to the strategic level of environmental performance, EOP refers to the operational level and therefore, can difficultly be measured in all-inclusive manner. This new conceptualisation highlights the involvement of employees at all level in environmental performance. Relatedly, pro-environmental employees constitute a great proportion of the success of environmental performance. Recruitment is a process whereby the recruiters and the applicants attempt to detect and evaluate each party's values/characteristics based on the information they perceive before and during the recruitment stages. It is apparent that within the very beginning episodes of green recruitment of which the main purpose is to attract pro-environmental job seekers to generate a larger pool of pro-environmental applicants, the employer will strive to send the information on what is expected by the pro-environmental job seekers or on what they are looking for. In this chapter, we define a pro-environmental job seeker to be a person who is sensitive to ES and is currently seeking for a job or has the tendency to go to the job market. Inevitably, sending the information on CEP while recruiting has a potential to interest these pro-environmental job seekers.

2.4.2.2. Signalling effect in green recruitment

2.4.2.2.1. Overview on signalling theory

Signalling theory, a multidimensional approach to the nature of human and nonhuman signals, is applicable to a variety of fields of study, including management and HRM (Connelly et al., 2011). Signal is defined as a sign or an indication of something that conveys notice or warning or transmits information (Merriam-Webster dictionary); it therefore can be recognised by a multitude of senses: seeing, hearing, smelling, touching and tasting that constitute a thought/feeling and generate one's perception. Signals are to reveal the nature, underlying quality or goals of a human, nonhuman or a phenomenon (e.g., a report on ES activities indicates a company's rate of greening orientation and performance, company's revenue or investment signals its financial standing, a letter of recommendation by a prestigious person indicates the reliability and appreciated competence of the referenced applicant).

Signals often carry a message from a signaller to a receiver with the intention of forming the receiver's feeling or belief on the signaller's characteristics or goals (Connelly et al., 2011). To assure the purposeful message be successfully interpreted by the receiver, the signal should be perceived as honest. Honest signalling and its effective outcome are vitally important in building and sustaining a perception and relationship between signaller and receiver. It is crucial that the signaller has the underlying quality that is associated with the signals sent and that the signal should be costly or hard-to-fake for it to be perceived as honest Bangerter et al. (2012). In this regard, « Handicap » principle is a metaphor of the honest signalling, the key concept in signalling theory.

« Handicap » principle implies that sending a message on accurate information imposes a cost on the sender that only certain individuals can bear Bangerter et al. (2012). The high cost the signaller takes on can be their money, time, energy, effort or sacrifice. Otherwise, the « Handicap » stands for an explicit incapability or a loss which is often perceived as a true signal because of less probability of being manipulated. This is the reason

why a costly signal is termed interchangeably with signal fit, signal reliability, signal veracity and hard-to-fake signals. A signal is reliable because only the truly high-quality signallers can bear the cost. For example, a thorough hand-written application letter is an honest signal, as it demonstrates the candidate's motivation toward the job and the employer, as well as the candidate's past experiences, which are hard to fake. It also shows that the candidate took the time to write the letter in a personalised style, which is not copy-and-paste elsewhere. From the recruiter's perspective, a letter of invitation and feedback composed to target a specific individual is always eye-catching and preferable to a letter format sent to everyone. A direct phone call to the applicant may infer his/her perception that he/she is admired and welcome. This is also effective in cases when an applicant is rejected, as it demonstrates the employer's gratitude for the time and interest that the participant dedicates to the job vacancy and therefore produces a perception of thanks. However, signals could be in the form of fixed attributes or the manipulable attributes, which are in a shifting conditional probability distribution to form the employer's beliefs. As such, effective signalling is based upon an adequate number of signals within the appropriate cost range (Karasek and Bryant, 2012). Moreover, a hard-to-fake signal is more likely perceived as honest than the costly signal, because the former is beyond the conscious control of the individual and is, therefore, intrinsically difficult to manipulate (Bangerter et al., 2012). For example, graphology, voice or speech may be applied as kind of personality test for candidate selection because it is hard to fake. Similarly, licence and patent acquisition is an honest signal representing the acquirer's underlying quality because it is hard to fake. Importantly, the « Handicap » is condition-dependent since only high-quality signallers are capable of meeting the requirement.

Signalling effectiveness can be enhanced by signal frequency and signal consistency (Connelly et al., 2011). Signal frequency refers to the extent to which more observable signals are produced or to which signals are increased in number. Due to the dynamic environment of signalling systems, the information available is constantly changing; signal consistency by which one sends various signals carrying the same message can therefore strengthen the effectiveness. In addition, signalling effectiveness is determined in part by the characteristics

of the receiver. It is crucial that the receiver heeds the signals and interprets them in the manner that fits the signaller's intent. Since the message is subject to be coded, different receivers may translate the signal to have different meanings, indicating that receivers' interpretations are important in signalling effectiveness. In fact, signalling is a two-way information exchange between the sender and the receiver. The receiver should, therefore, send feedback to signallers about the effectiveness of their signals. Sometimes, receivers can give feedback in the form of countersignals or camouflage to facilitate efficient communication (Connelly et al., 2011). Relatedly, attention to countersignals can result in more efficient signalling in the future. In such a case, both the signaller and the receiver desire to obtain information about each other, for attaining the effectiveness, they may learn to improve the reliability of signalling by studying which signals are more reliable, which ones get more notice from the receiver and how the receiver interprets these signals. To maintain the effectiveness of signalling, the costs of signals must be structured in the way that false and misleading signals cannot pay; otherwise, they would be ignored by the receiver (Connelly et al., 2011) or, in some cases, the receiver may give negative feedback or punishment, called a costly penalty.

The nature of signalling theory is that the signallers are the insiders (e.g., CEO, managers, recruiters) who know the information that is not available to the outsiders (e.g., stakeholders, job seekers) who want to explore and obtain that information. Additionally, there are often multiple signallers or signals so that information asymmetry exists as an inevitable phenomenon. As a result, signalling should aim at obtaining an unobservable quality and reducing information asymmetry. Furthermore, various signallers may benefit differently from the receiver's response, as they will choose different sizes of the « Handicap » to produce. Each one tends to signal in the « Handicap » manner most appropriate to themselves to make it easier for the receiver to judge the sender's quality. As a result, the « Handicap » principal is becoming more complex (Bangerter et al, 2012).

2.4.2.2.2. Signalling effect in attracting pro-environmental job seekers

Generally speaking, recruitment is a mind-reading process between the job seeker and the recruiter because each party lacks information on the other; hence, they will assess the unobservable based on the observable (Bangerter et al., 2012). They will also use what information they have, for example, gender, income, experience, university transcripts and so on, to infer the characteristics of the other (Karasek and Bryant, 2012). From the applicant's perspective, signalling theory explains that job seekers have incomplete information about the employer (Celani and Singh, 2011; Connelly et al., 2011) and the information supplied by recruiters during selection process serves as signals about organisational attributes and job attributes to inform applicants about their would-be life at that organisation if they are hired. Conversely, recruiters conclude applicants' capabilities and fit with the job by studying their résumés, assessing job interview responses and conducting selection tests on skills and personalities. This signalling is therefore an interaction between job seekers and employers or recruiters that may occur at job fair, job interview or company branding activities, what is called by Bangerter et al. (2012), a signalling game that depends on the job market pressure. In the context that there are more and more companies engaging in ES and that the job seekers might have a perception of *greenwashing*¹ toward the organisation, the pressure on the employer in the signalling game is higher than on the pro-environmental job seekers, especially at the beginning episodes of green recruitment. Moreover, in the « war for talent », the employers tend to take part in the « arms race » to compete with each other to win the employment with the prospective employees. As such, the differentiation and the reliability of the pro-environmental employer/recruiters or the information source are crucial in attracting pro-environmental job

¹ *Greenwashing is when a company promotes environmental performance and images, but operates in an opposite manner to the goal of the announcement, or when it utilizes exaggerated advertisement in an unbelievable way (<http://www.investopedia.com/terms/g/greenwashing.asp>).*

seekers. This chapter assumes that « Handicap » principle characterising the costly or hard-to-fake signals and its derived characters is the principle of green recruitment.

To date, because of the vast development of information technology and the internet, people worldwide go online more frequently to communicate and search for information. Pro-environmental recruiting message on internet associated with e-recruitment is therefore an effective signalling channel that quickly catch the attention from pro-environmental job seekers. In this regard, Kashi and Zheng (2013) assumed that the job seekers perceive anything or anybody related to the organisation as signals of how they feel as being working in that organisation. The impression on company's recruiting web page therefore forms their impression on the job vacancy and on the employer. Accordingly, people are often attracted to what they concern about, the pro-environmental job seekers, who are sensitive to ES, will be attracted to such pro-environmental information. Examples can be drawn from the quantitative study by Behrend et al. (2009), which highlighted the effects of pro-environmental recruiting message in attracting prospective employees. In believing that applicants who are highly concerned for the environment are more likely to pursue employment and accept job offers from pro-environmental organisations, the authors hypothesised that the pro-environmental message (e.g., on the company website) would affect the job pursuit intention of job seekers who were relatively supportive of the environment more than it would affect the preferences of those who were relatively unsupportive of the environment. Interestingly, the results rejected this hypothesis; the message's effect on job pursuit intention was not dependent on individual's personal environmental stance. Results showed that the effect of the pro-environmental message was significant, such that participants who saw this pro-environmental job advertisement were willing to pursue employment with the signalling company. Remarkably, the mediating role of organisational green reputation in the relationship between the pro-environmental message and pursued employment was supported. Behrend et al. (2009) explained that those individuals interpreted the organisation's concern for the environment as a sign that it is caring, trustworthy and would therefore show concern for its employees. Additionally, these

job seekers thought that if the organisation could spend money on environmental activities, it could afford to pay its employees well.

Another effective signalling channel is the recruiter/HR specialists as these ones are considered the employer's representative and a source of information that links to the organisation. In this respect, scholars on applicant attraction have linked recruitment with impression management (IM). One qualitative study by Wilhelmy et al. (2016) explained the signalling process in an interview from the viewpoint of the interviewers in order to find how and why interviewers tried to make impressions on applicants. The authors assumed that the interviewer strived to detect what interests the applicants to send appropriate signals to deliberately create impressions on them. Their results revealed two types of IM intentions, the primary refers to the goals of representing the organisation by signalling organisational attractiveness and authenticity, while the secondary refers to the interviewer's personal interaction with applicants, including signalling closeness (with the purpose of building rapport, appreciation or trustworthiness) and signalling distance (to demonstrate the professionalism or superiority). Both closeness and distancing can be adapted simultaneously by the interviewer. To exhibit those intentions, the interviewer can adopt from numerous behaviours categorised into three groups: (1) verbal IM behaviours, whereby interviewers focus on the content to influence applicant impression; (2) paraverbal IM behaviours, which are verbal behaviours other than words, such as modulating the voice; (3) nonverbal IM behaviours, which refer to body language; (4) artifactual IM behaviours, which concern how interviewers use an object/other aspects to influence the impression, such as their appearance, visual display during interview, giveaways or promotional items for applicants or seating arrangements; and (5) administrative IM behaviours, which refer to the timing communication and services, such as offering drinks, travel expense refunds, personal invitations and receipt confirmation of application documents. The findings showed a variety of intended IM outcomes in recruitment, including valued information cultivated from applicants' personal disclosure, applicants' positive attitudes and perceptions toward the organisation, stronger reputation and career advancement of interviewers, applicants' job choice intention and behaviours and applicants' recommendation intentions and behaviours.

In green recruitment, it is necessary that the recruiters/interviewers behave in a pro-environmental manner unified with the organisation's pro-environmental stance, because the fact that they « walk their talks » will leave the participants a good impression on the organisation's ecological characteristics or organisational green culture. Additionally, to increase the signalling effectiveness, another study by Wilhelmy et al. (2017) have confirmed the positive effect of organisation-enhancement, the extent to which the recruiter strives to create an attractive image to “sell” the organisation to the applicant or to enhance the organisational prestige, and applicant-enhancement, the extent to which the recruiters show the interests for the applicant's ideas or admirations on his/her past achievement/capabilities. Notably, consistent with signalling theory perspective, Wilhelmy et al. (2017) also found that the degree to which the signalling is successful depends upon whether the job seekers actually receive the signal and that this could be studied via applicant's reactions and perceptions.

As aforementioned, the reliability of the green signals determines the job seeker's positive perception toward the organisation. We assume that information from third party will increase the reliability since it reduces the subjective opinion. From the job seekers' part, their relatives, friends, colleagues, acquaintances and the associates are a good address to seek for further information and opinion. As such, the employer can make use of this and signaling on green recruitment via their employees. Taking this into consideration, the employer can provide employee testimonials (video or image) whereby the extant employees share their experiences and opinions toward the pro-environmental issues and their job. Otherwise, the employees/recruiters can play their part as the information forwarder. Their social network will be then a potential pool of candidate. This signalling manner is effective particularly in chasing the best fit because the employee/recruiter is the middleman who knows well both parties (the employer and the desired candidate). For both cases, we anticipate that selling environmentally-related personal story and experiences can attract the pro-environmental job seekers because these ones seek for the real context to make inferences on their would-be life at that organisation and have the tendency to believe in personal sharing.

Above all, a pro-environmental job seeker is both a potential employee that links to a pro-environmental network and a potential customer/client. Successful signalling in green recruitment will be associated with pro-environmental job seeker's good perception toward the employer, the recruiter or the job vacancy and therefore, brings multiple outcomes, including but not limited to job seeker's intention to apply, job pursuit, job acceptance, job recommendation or their intention to buy/recommend the company's products/services. One cannot disregard entirely the surroundings and often pursues the signals to which he/she is attracted. Therefore, pro-environmental signalling is useful and worthy for attracting pro-environmental job seekers, provided that the employer's/recruiters' behaviours comply with the « Handicap » principle.

2.5. Proposition development

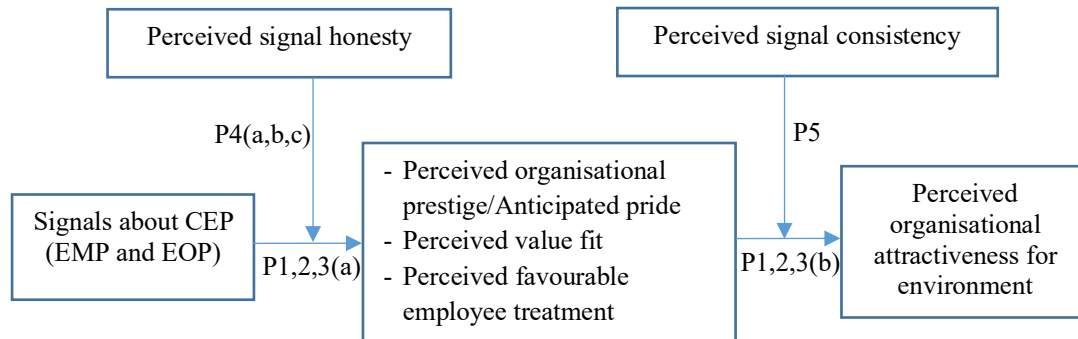
2.5.1. Linking CEP and organisational attractiveness for environment through signal-based mechanisms: A conceptual model of « Handicap » principle

One study by Backhaus et al. (2002) studied the participants' ratings on the most popular dimensions of CSP and found that the environment was among the three most powerful factors to inform organisational attractiveness as an employer; the other two were community relation and diversity. This finding supports the idea that job seekers have long been sensitive to information on the environmental activities of the employer, which signal its prestige, ecological values and prosocial orientation. What needs to be further studied is how candidates interpret the various signals on CEP and how their perceptions are transferred to perceived organisational attractiveness for environment.

We propose discussing to what extent five signal-based mechanisms (including job seeker's perceived organisational prestige/anticipated pride, perceived value fit, perceived favourable treatment, perceived signal honesty and perceived signal consistency) intervene in and reinforce the relationship between CEP – in the form of EMP and EOP – and job seeker's perceived organisational attractiveness for environment. We assume that signalling theory and its « Handicap » principle are suitable to explain the process by which job seekers

form their impressions on the employer, which may lead to other recruitment outcomes, such as job pursuit intention, job acceptance, job recommendation or the increase in organisational green prestige. Figure 2 is our proposed conceptual model inherited and developed from Jones et al. (2014) and Trumpp et al. (2015).

Figure 2: Proposed conceptual model adapted and developed from Jones et al. (2014) and Trumpp et al. (2015)



2.5.1.1. Perceived organisational prestige/anticipated pride

Grounded in social identity theory, job seekers' anticipated pride results in their identification with the employing organisation due to the feeling that becoming an employee of this organisation will enhance their self-worth (Jones et al., 2014). Organisational prestige refers to the perception of the society and stakeholders on an organisation and thus corresponds to the organisational reputation (Bartels et al., 2007; Moura-Leite and Padgett, 2014; Uen et al., 2015). That is, when a company is considered prestigious, it has social approval for its business operation and gains trust from its stakeholders. Participating in ES practices contributes to organisational reputation because it introduces the prosocial orientation of the organisation and responds to normative expectations of stakeholders (Moura-Leite and Padgett, 2014). For example, CEP pertaining to an EMS (e.g., ISO 14001) signals the firm's economic and legal responsibility.

In addition to an action plan, the legitimacy of an environmental policy and the strategic management of environmental performance gain the credibility of organisational

prestige. Jones et al. (Jones et al., 2016) found results supporting their hypothesis that an employer's ES practices send signals to job seekers about the employer's reputation and prestige, from which job seekers infer how proud they would feel as one of its employees. As a result, signalling on such practices or on CEP, as formally assumed in this chapter, generates job seekers' anticipated pride and, in turn, their perception of organisational attractiveness for environment. Additionally, pertaining to the characteristics of signal frequency, the richer is the information on CEP, the more effective the signalling mechanism will be. As such, we propose as follows:

Proposition 1a: Perceived signals about the employer's CEP, in the form of EMP and EOP, are positively linked to job seeker's perception of organisational prestige or anticipated pride with the organisation.

Proposition 1b: The job seeker's perception of organisational prestige or anticipated pride is positively linked to their perceptions of organisational attractiveness for environment.

2.5.1.2. Perceived value fit

The conceptualisation of person–organisation fit (P–O fit) posits that a person is apt to perceive a fit with an employer if he/she finds the compatibility between himself/herself and the organisation with respect to values, goals or traits (Silva et al., 2010). In this context, the P–O fit is subjective compatibility because it is based on the candidate's own evaluation; for example, « *My values correspond to those of the employees at this organisation* » or « *I think that my personality corresponds to that of the employer/organisational image* » (Morin et al., 2011). Candidates tend to seek an employer who can fulfil their needs and meet their expectations on opportunities and personal attitudes on development. In this regard, P–O fit is believed to be a powerful predictor of organisational attractiveness.

An empirical study on 287 final-year undergraduate students at a large business school in a developed Asian economy, which emphasised on different types of expectations for P–O fit, proved the key role of individuals' expectations on both value expression and

needs–supplies (Yu et al., 2014). The author explained why job seekers care about a P–O fit on values and opportunities for value expression. Consequently, symbolic value, including organisational reputation, is one of the decisive factors of job seekers’ acceptance behaviour. A meta-analytic test of seven commonly-explored predictors of applicant attraction found that P–O fit was the largest predictor, suggesting organisations find ways to foster candidates’ perceptions of fit (Uggerslev et al., 2012). Also, Gully et al. (2013) found that the positive effect between perceived P–O fit and organisational attractiveness was greater among individuals with high socio-environmental values. This finding suggests that employers should communicate their ecological values in their recruiting message. Also, the results of Jones et al. (2016) supported another hypothesis that an employer’s ES practices send signals to job seekers about its organisational values, from which they infer perceived value fit. Similarly, our propositions for the perceived value fit mechanism are as follows:

Proposition 2a: Perceived signals about the employer’s CEP, in the form of EMP and EOP, are positively linked to job seeker’s perceived value fit with the organisation.

Proposition 2b: The job seeker’s perception of value fit with the organisation is positively linked to their perceptions of organisational attractiveness for environment.

2.5.1.3. Perceived favourable treatment

There are two reasons that lead to our assumption on the mechanism of job seeker’s perceived favourable treatment. First, one of the two main goals of interviewers introduced in recruitment literature is applicants’ positive emotions or making the interview a pleasant experience for applicants (Wilhelmy et al., 2017). Accordingly, from an attraction perspective, people are often attracted to those who treat them good. In the context of green recruitment, we contend that both environmentally-friendly settlement and ambience created by the employer’s/recruiter’s during the interaction with the pro-environmental job seekers as well as the employer’s pro-environmental behaviour that are favorable to the pro-

environmental job seekers make them have a positive emotion and notice the employer's green signals.

Second, based on the received signals, a job seeker might have an expectation on a favourable treatment which refers to his/her hope that the employer cares for its employees in a just manner and corresponds to his/her expectation of favourable employee treatment (Willness and Jones, 2013). The positive relationship between ES practices and job seekers' expectation on favourable treatment was also supported by (Jones et al., 2016). From a candidate's perspective, there is a dearth of information on working condition and an organisation's attitude toward its employees; candidates are often attracted to those signals which form their perception of how well the employer would treat them as its employee. CEP corresponds to four dimensions of CSP, including economic citizenship, legal citizenship, ethical citizenship and philanthropic citizenship, in which the economic dimension represents a firm as a basic economic unit in society, given that the firm cares for its employees (Tsai et al., 2014). This means that the employer is expected to provide a good working environment and a good employee life cycle, including recruitment, employee induction, appraisal and promotion (Zibarras and Coan, 2015). There are some explanations for this mechanism. First, due to the legitimacy of an EMS, job seekers may interpret signals of organisational management and operation conforming to the environmental standards as a safe, eco-friendly working condition. Second, in terms of the philanthropic citizenship approach, when the employer is actively engaged in discretionary ES activities, this signals that it cares for the society and others' well-being. This generates job seekers' expectations of just treatment. Third, as earlier presented, CEP is positively related to financial performance because it not only reduces waste, energy and material consumptions, but also increases work efficiency, leading to higher organisational outcomes. When an organisation is engaged in ES practices, it means that it has enough resources to invest in and can afford these activities. As a result, job seekers may infer that the organisation has good financial standing and, in turn, can sustain those environmental practices. Working for such an employer will bring job seekers opportunities to fulfil their needs regarding pro-environmental issues. Taken together, we propose as follows:

Proposition 3a: Perceived signals about the employer's CEP, in the form of EMP and EOP, are positively linked to job seeker's perceived favourable treatment.

Proposition 3b: The job seeker's perception of favourable treatment is positively linked to their perceptions of organisational attractiveness for environment.

2.5.1.4. Perceived signal honesty

In this chapter, we assume that the employers'/recruiters' behaviours and the signalling game need to comply with the « Handicap » principle. Such that, the signalling and the signal itself should be costly or hard to fake and demonstrate the employer's underlying quality. On the one hand, this will increase the reliability and trustworthiness of pro-environmental signals. In this regard, a job seeker's positive point of view on certain signal must stem from his/her assessment on this signal/the signalling that is perceived as correct. Otherwise, the motive of the signal/signalling is perceived as for the right pro-environmental objectives, it can be also for the welfare of the employees, the community or for the job seeker's benefit. On the other hand, when a pro-environmental signal has a distinctive character or is differentiated from any others that are being produced by other employers, it will inherently eliminate the uncertainties and help the job seeker to identify easily the employer's pro-environmental characteristics. Additionally, from an attraction perspective, a strange signal has the likelihood to catch attention and at times, even a tiny one can have an attracting effect provided that it is outstanding. As a result, we assume that perceived signal honesty is vital in making inferences, especially at first sight because at the moment when the job seeker senses the signal, this one naturally has a first quick response – a thought even without conscious reasoning. Accordingly, the higher level is the job seeker's perceived signal honesty, the more effective is the signalling mechanism. Our propositions are as follows:

Proposition 4a: The higher is the job seeker's perception of signal honesty, the more likely they perceive an organisational prestige for environment or anticipate a pride.

Proposition 4b: The higher is the job seeker's perception of signal honesty, the more likely they perceive a value fit with the organisation.

Proposition 4c: The higher is the job seeker's perception of signal honesty, the more likely they perceive a favourable treatment.

2.5.1.5. Perceived signal consistency

Signal consistency refers to the extent to which all signals carry the same message/characteristic. As aforementioned, the signal consistency increases the signalling effectiveness. The nature of signalling game is that each party strives to get each other's information and make inferences about each one's characteristics. Apparently, a job seeker might wonder about the employer's characteristics. Naturally, the job seekers will chase the employer's history and make a link to what they have already known, which is referred to as internal search and memory scan, in order to make an overall assumption. A job seeker therefore goes through a retrospective process in which he/she may make evaluation or judgement on the employer's characteristics based on a combination of or a comparison between the newly received signals and those ones in the past events. In this case, the extent that all pro-environmental signals, which the job seeker receives before and during the green recruitment stages, are consistent will increase the likelihood that he/she has an overall positive perception toward the employer and perceive organisational attractiveness for environment. The consistency here can be referred to as the extent that the new behaviour is consistent with those behaviours that have been already observed (Pfeffer and Salancik, 1978). Otherwise, we assume that a job seeker perceives a signal consistency when he/she finds that the pro-environmental signals are logic and that these ones are compatible with the employer's orientation, their ecological values or with their (new) pro-environmental objectives. As previously analysed in the signalling game, it will be easier for the job seeker to judge the employer's quality if the employer signals in the « Handicap » manner most appropriate to themselves. As a result, we propose as follows:

Proposition 5: The more the job seeker perceives the signal consistency, the more they perceive the organisational attractiveness for environment.

2.5.2. Relevance of « Handicap » principle in explaining attracting mechanisms in the context of corporate environmental performance

Although previous literature has addressed the positive effect of CSP, including environmental dimension, on organisational reputation and organisational attractiveness (Turban and Greening, 1997; Greening and Turban, 2000; Backhaus et al., 2002; Jones et al., 2014), little is known about the mechanism of how the implementation of CEP, at both the strategic level (EMP) and the operational level (EOP), has a positive effect on attracting eco-minded candidates. We contend that signalling theory and its principle contribute great value in recruiting new dedicated pro-environmental employees who have the consciousness of environment. Especially, the two new signal-based mechanisms proposed in this chapter along with other possible moderators discussed below will provide the insights into the attracting mechanisms that explain why a pro-environmental job seeker might or might not perceive a value fit with the organisation and how to activate his/her interests for the environment in general and for the organisation in particular.

Previous researches showed mixed support for the effect of the perceived value fit mechanism, especially in those studies using individual differences in pro-environmental attitudes. In the manipulating study of Jones et al. (2014), senior undergraduate participants were asked to review fictitious company web pages, and the effects of perceived value fit were above and beyond those of the other two mechanisms. An analysis on individual differences also resulted in those with higher pro-environmental attitudes rating the organisation as being more attractive. Another supportive study found that perceived value fit positively related to both organisational attraction and job pursuit intention, and that the effect of communicating high levels of socially and environmentally-responsible goals were related to a high level of job pursuit intention among those with a stronger desire to have significant impact through their work (Gully et al., 2013). On the contrary, other studies

failed to support both the perceived value fit mechanism and the difference on personal attitudes toward the environment (Greening and Turban, 2000; Behrend et al., 2009).

There are some explanations for the unsupportive results on perceived value fit and the « Handicap » principle does assist. First, it may be due to the strong effect of a manipulated green recruiting message that leads participants to perceive organisational attractiveness in a different manner. For example, individuals who do not hold ecological values may still evaluate an environmentally friendly company positively (as shown in the results of the study by Behrend et al. (2009)). In this case, the relationship between CEP and organisational attractiveness is not explained by the perceived value fit, but by other two signal-based mechanisms. Second, since the participants' perception of value fit is subjective – as they are focused on their comparison between their own values and the signals received from the recruiter or the researcher who manipulated the study – it depends on their regards toward the pro-environmental issues. Their attitudes or beliefs toward certain dimensions of CEP might be different from those assumed by the recruiter or researcher. Furthermore, individual ecological values differ across participants depending on two utility functions motivated by egoistic and altruistic considerations (Grolleau et al., 2012). Egoistic individuals are more likely to engage in ES practices for their self-enhancement and personal benefits, while those with altruistic motivations are more for the welfare of others, specifically for the environment. Third, since companies differ in their ES practices, each participant may evaluate these companies differently. Not to mention, because those studies were all based on fictitious or manipulated recruiting messages (electronic or printout version), participants' interpretations and perceptions could vary depending on which information of the environmental construct had been used to signal in the survey and the size of the « Handicap » signals. For example, the supportive study by Jones et al. (2014) signalled the effect of the environmental dimension of CSP using the information on donation and employee volunteer programs, employee involvement in energy reduction and recycling. These explicitly specific signals facilitate participants' interpretation. Also, the message could attract both egoistic and altruistic individuals. Contrarily, the study by Behrend et al. (2009) tested the effect of a recycling symbol and a statement (company RLA supports the

environment) without no other additive information on a company's environmental practices. This signalling limited participants' interpretation on ecological values. Additionally, the message highlighted the company's fast-paced environment, which is dynamic, innovative and fun. This accidentally created information asymmetry between ecological issues and the physical working environment, while signalling theory aims to reduce information asymmetry. Finally, the unsupportive results on perceived value fit are those of pioneer studies using sophomore and college student samples (Greening and Turban, 2000; Behrend et al., 2012) while the supportive results came from recent studies using a university senior student sample or a large online sample of job seekers (Gully et al., 2013; Jones et al., 2014). Consequently, there may be a possibility that ecological values differ among different generations, levels of education and job experience. Likewise, as these studies are all conducted in the United States and Canada, the fact that the effect of the perceived value fit mechanism has become stronger in recent studies (conducted in 2012 and 2014) than in the previous (conducted in 2000 and 2009) may due to a shift toward a pro-environmental stance and a more familiar approach that enables employee involvement and then enhances eco-mindedness.

Another unexpected result on organisational attractiveness pertains to the question of why some are attracted to information on a company's CEP practices and others are not. In the study by Jones et al. (2016), a little more than one third of the total sample claimed that information on community involvement and ES did not enhance organisational attraction. The responses to an open-ended question indicated that 8 participants, accounting for 20.5% of subsample, perceived a general lack of fit; 3 participants prioritised other factors, such as compensation/pay and job role or promotion; 2 participants worried that investment in ES would detract from the company's profits and another participant thought it would have been better, if there had been pictures with the company's employees so that he/she could picture himself/herself working there. The authors (Jones et al., 2016) found factors leading to the scepticism and cynicism of job seekers, including prior experience with an employer's *greenwashing*, the need to see/experience the company's ES practices to believe it, the need for more detailed information and the questioning of the nature/motives they attributed to the

employer's investment in ES practices. Briefly, most scepticism and cynicism are surrounded by the job seekers' suspension of the credibility of CEP information. As previously analysed, attracting candidates in recruitment is indeed a signalling process between the employer or recruiter as the sender and job seekers as the receivers, whereby the sender strives to signal the receiver about the sender's underlying value. The « Handicap » principle of signalling theory posits that signals must be costly or hard to fake to be perceived as honest. Besides a company's website and interviewer, the employer could adopt other methods to communicate CEP information; for example, positive word-of-mouth (especially, transferred from extant employees to their friends), information published by third parties (e.g., a company's achievements/awards – such as an ISO certificate, media and broadcasting) and employee testimonials (Jones et al., 2016).

Signalling should avoid *greenwashing* (Milliman, 2013) and emphasise what would be most expected by the targeted candidates. In this regard, the five signal-based mechanisms work as predictors of applicant attraction. Depending on the type of candidates, a recruiter should detect what type of signal the job seeker is more attracted to and is more likely to interpret successfully. For example, graduate job seekers might have a tendency to pursue a job with organisations that are prestigious to enhance their profile and career mobility; generation Y might be more attracted to firms with ecological values; managers might be more attracted to an organisation with proactive strategies and workers whose jobs are primarily located in hazardous or polluted areas might care more about the working condition and green compensation. Personality and ecological tests may reveal whether the applicants are altruistic or egoistic so that interviewers can signal in different manners. Similarly, different kinds of CEP signalling should be adopted for different job positions.

Another principle of signalling theory is that the sender must have underlying quality; otherwise, false and misleading signals would be ignored by the receiver (Connelly et al., 2011). In recruitment, it is critical to avoid delivering fake signals because they could ruin the organisational prestige that takes years to regain. To avoid the hazards of *greenwashing*, companies are encouraged to adopt a proactive approach to CEP that requires them to engage in environmental strategies and practices (EMP and EOP) prior to the occurrence of negative

incidents involving the firm; this approach engenders stronger trust and facilitates the attributions of the credibility of CEP information (Willness and Jones, 2013). Finally, signalling effectiveness can be enhanced by signal frequency and signal consistency (Connelly et al., 2011). The recruitment plan of each position should be designed carefully before implementation to make sure that the signals transferred by various senders or recruiters are consistent in nature and that they simultaneously aim at activating at least one of the three predictors of applicant attraction, depending on what attracts the group of candidates the most.

In this respect, the recruiter/interviewer can choose to transfer the message via inspirational quotes, company's banners, environmentally heart-touching images, event photos/behind-the-scene photos, offerings or even recruiter/interviewer's personal story, feeling and perception toward the employer's environmental issues, etc. For example, heart-touching images concerning environmental problems along with inspirational quotes may activate the individual's environmental consciousness, information on green training and development program/promotion opportunity may activate the egoistic individual, information on company's green improvement programme and rewards for eco-initiative may activate the individual's creativity and ambition to contribute a significant impact through his/her work, a photo of staff in company's recognition may activate the individual's anticipated pride of being affiliated with the organisation. Importantly, this signalling requires the recruiters/interviewers' sensitivity toward the applicant's characteristics and expectation, and their pro-environmental behaviours to comply with the « Handicap » principle. Accordingly, the recruiters/interviewers play a foremost role as an activator of job seeker's perceived organisational attractiveness for environment.

2.6. Conclusion

Given the importance of qualified employees with the context of demographic change and the shortage of human resources in some countries, recruitment plays a crucial role, regardless of economic growth or recession (Morin et al., 2011). Successful recruitment

facilitates later practices after organisational entry, such as training, retaining and involving employees. Due to expectations from multiple stakeholders and organisational socio-environmental consciousness, organisations are to embed ES strategies into their core business practices. Therefore, green recruitment constitutes a great proportion in the guarantee of environmental performance by recruiting pro-environmental candidates. Accordingly, attracting pro-environmental job seekers is vital, especially when organisations are in an « arms race » for obtaining a high-quality workforce.

In assuming CEP as the indicator of an environmentally-responsible employer, this chapter is set out to explore how signalling on CEP has a positive effect on job seekers' perceptions of organisational attractiveness for the environment before and during green recruitment process. Our proposed conceptual model of « Handicap » principle shows that signalling on CEP – in the form of EMP and EOP – will generate job seekers' perceived organisational prestige/anticipated pride, perceived value fit or perceived favourable treatment, which will lead to their perception of organisational attractiveness for environment. This model highlights the aggregated CEP construct that demonstrates employee participation at both the strategic and operational level. A recruitment process that limits information transmission will reduce potential organisational attractiveness (Morin et al., 2011). Hence, to catch job seekers' attention and sustain their interest to stay, signalling on CEP should be implemented during the stages of green recruitment, provided that it respects and complies with the « Handicap » principle and that the message carries the underlying quality of the employer. In this regard, the two new concepts – perceived signal honesty and perceived signal consistency – shed light on the principle for candidate attraction in order to make job seekers have positive perceptions toward organisation.

This chapter has both theoretical contributions and practical implications. Theoretically, our research helps fill the gap in GHRM in a manner that promotes the involvement of green recruitment in the guarantee of quantity and quality of green HR, as well as increases an organisational image as environmentally-responsible employer. Relatedly, the findings enrich the literature in green recruitment by illuminating the « Handicap » principle for candidate attraction. In addition, our research has extended previous

GRHM literature in some ways. First, our model contributes to the three signal-based mechanisms introduced by Jones et al. (2014) and extends their research in the way that two new concepts – perceived signal honesty and perceived signal consistency – give an insight into the attracting mechanisms and prove for the « Handicap » principle in green recruitment. Second, thanks to the conceptualisation on CEP by Trumpp et al. (2015), we contend that implementing CEP – both EMP and EOP – is important for attracting pro-environmental job seekers, as it signals that the company is responsible not exclusively for its business operation and the community, but also for the company's extant employees and the potential ones. Such responsibility increases organisational prestige.

From a practical perspective, green recruitment is worth practising to attract better participants who are more sensitive to environmental aspects and who voluntarily participate in a company's CEP practices. Signalling information on CEP enables employers to promote their prestige, thus gaining society's trust, as well as attracting and retaining pro-environmental employees. Furthermore, different job seekers are attracted to different “carrots” and “sticks”, interviewers/recruiters could therefore leverage each mechanism, adopting adequate information to signal targeted candidates in the way that activates their positive perception toward ecological values and organisational attractiveness for environment. To enhance the effectiveness of green recruitment, respecting and making use of the « Handicap » principle is needed. Finally, each individual is more likely to trust in a specific signalling method and the probability that signalling effect is successful depends upon whether the pro-environmental individual actually receives the signals. As such, utilizing various methods of communication to signal consistent information facilitates successful attraction in green recruitment.

Our findings suggest some directions for future research. Given that previous studies in green recruitment are implemented in developed countries, empirical studies are encouraged to test this conceptual model of « Handicap » principle and the ten propositions internationally, leveraging the different effects of the five signal-based mechanisms in different contexts. Further research would be on the relationship between organisational attractiveness for environment and job acceptance behaviour, as well as on other moderators,

such as financial performance, organisational sector, organisational internationalisation, job characteristics and perceived signal frequency.

Chapter 3

AN EMPIRICAL STUDY IN VIETNAM

Objective: To test the effect of pro-environmental signalling about the corporate environmental performance of a real-world environmental oriented enterprise on potential pro-environmental job seekers for green recruitment and selection

Method: Focus Group

Enterprise studied: Y

Industry: Automobile

Year of data collection: 2019

Certificate of Ethics No.: 2018-306/25-03-2019 issued by CÉRUL, ULaval

3.1. Introduction

This chapter sets out to test the effect that corporate environmental performance (CEP) signals in a real business context have on pro-environmental job seekers' perceptions of organisational attractiveness for environment from the initial episodes of a green recruitment process. During this period, recruiters focus their efforts on providing information to job seekers/participants (Uggerslev et al., 2012) through pro-environmental messages. These initial episodes address the targeted pro-environmental talents to the employer, generating positive perceptions towards the employer/job vacancy and their willingness to apply. Chapters 1 and 2 have already explored three communicating channels for delivering CEP signals in a tactical manner and the principle of delivering pro-environmental recruiting messages, in which two guiding codes of conduct are signal honesty and signal consistency of sufficiency. Extending this line of research, this chapter aims to present an empirical study conducted in a developing country context with a view to observing the homogeneity effect confirmed in a developed country context by other researchers in the field. The automotive industry was targeted as part of the study for two reasons. First, it is a key sector in the environmental movement that serves our basic transportation needs. Second, the “Dieselgate” scandal of Volkswagen, who was charged for having installed a cheat device into VW and Audi 2.0 L diesel vehicles from 2009-2015 concealing their true emissions which were much higher than the permitted level ([Dieselgate timeline](#)), probably caused the society to suspect of dishonesty of automotive industry. This environmental crime is dangerous because the air we breathe is the foremost natural resource in the sense of impacting the life of human beings more quickly than any other resource.

In this regard, one important warning from signalling theory is that false and misleading signals proliferate until the receiver learns to ignore them. Here, the challenge for management is to determine how to structure the cost of honest signals in such a way that dishonest signals do not pay (Connelly, et al., 2011). The risk arising from the deceitful actions of an environmental crime is not limited to the health impact. Its negative consequence is the fear, cynicism, and prejudice in our society over man-made honesty

which, furthermore, disrupts the belief system which is the most important part for our continuity in doing for and protecting the appropriately right thing. In the case of “Dieselgate”, the mismanagement of one carmaker probably has a negative impact on other carmakers if cynicism and prejudice exist in a society made up of consumers, future clients, investors, and employees. As part of the focus of this chapter (job seeker’s perceived organisational attractiveness for environment), an investigation of job seekers’ inferences about the existing CEP signals of an environmental oriented carmaker is worth conducting to explore the best practices for delivering a pro-environmental message in the context of the « Handicap » principle examined in this thesis in the real-world presence of dishonest signals without thereby undermining the trust of job seekers in the honest signaller. Therefore, the findings will have managerial implications for business firms in general and for the automotive industry in particular on communicating and signalling about CEP before and during green recruitment. The national context is Vietnam and one carmaker, a member of VAMA – the Vietnam Automobile Manufacturer’s Association, is the field within which the empirical data collection was performed.

The remainder of this chapter is organized into three sections. The first section provides a brief overview of the Vietnamese context and its automotive industry. The next section introduces the theoretical framework of the empirical study, which examines the real target of the pro-environmental message in the different phases of development, focusing on the pro-environmental recruitment mechanism, and puts forwards hypotheses for investigation. The third section presents the method used to conduct the empirical study and collect the data.

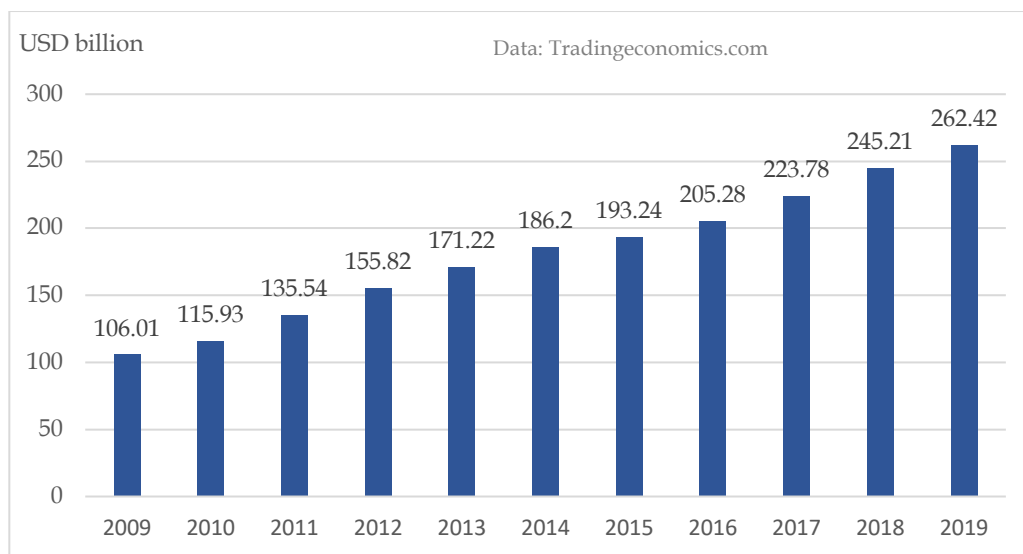
3.2. Vietnamese context

3.2.1. Opportunities and challenges

Located in Southeast Asia, Vietnam is currently ranked as a lower middle-income country with an average GDP in 2009-2019 of 181.87 USD billion. GDP has been increasing

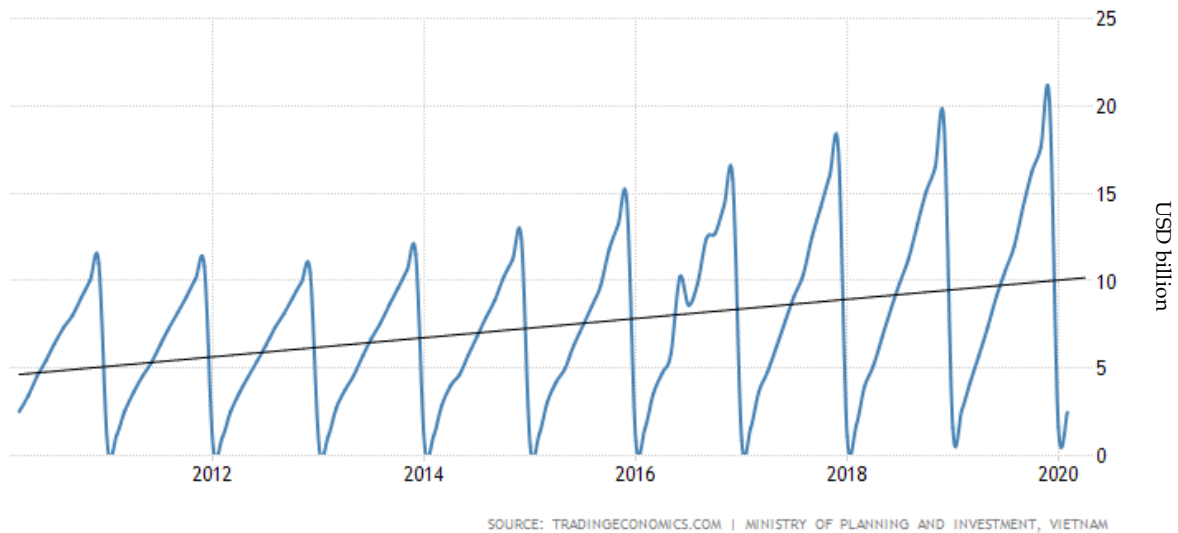
gradually over the past decade and reached an all-time high of 262.42 USD billion in 2019, representing 0.01 percent of the regional economy (graph 1).

Graph 1: Vietnam's GDP over the past decade



When Vietnam joined the World Trade Organisation (WTO) in 2017, the country was considered an attractive destination for FDI projects. However, the last decade has seen a fluctuation in FDI value and a gap appearing between FDI performance and potential, a trend that has driven the country to improve its absorptive capability before attracting more FDI flows (Nguyen, 2016a; Nguyen, 2016b). FDI reached an all-time high of 17.50 USD billion in December 2017 and 17.62 USD billion in November 2019 (graph 2). The Republic of Korea (ROK) was the largest investor over the period 1988-2016 with a total cumulative investment in Vietnam of 50.7 USD billion (Wright and Blomenhofer, 2017). Meanwhile, Singapore is presently the main source of FDI, followed by China and South Korea. The largest investment sector is electricity distribution, followed by manufacturing and processing (Vietnam Ministry of Trading and Investment).

Graph 2: Vietnam Foreign Direct Investment over the past decade



While Vietnam is ranked 68th out of 190 economies (as of 2017) for doing business, Vietnamese manufacturing and trading companies are facing increasing challenges because of more restrictive policies. On 8 March 2018, Vietnam along with other 10 Asia-Pacific nations signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), in which Vietnam is Canada's largest trading partner (International.gc.ca). CPTPP membership provides Vietnam with both opportunities, including boosting exports and attracting more foreign investors, and challenges surrounding the wide gap to be bridged before achieving the targeted level of development that requires the country to quickly strengthen its legal system, the quality of its products, its environment and society more generally (Phan, 2016). Though the period 2016-2019 saw the country devote significant efforts into fighting corruption, other capabilities also need to be enhanced, including labour standards, intellectual property (Phan, 2016), and environmentally-related standards, with food safety, SPS (the application of sanitary and phytosanitary measures) and TBT (technical barriers to trade) representing particularly strict regulations under the CPTPP.

3.2.2. Environmental problems and the development burden

Because of rapid industrialization and urbanization, Vietnam faces the same problems as other emerging economies, including over-population and pollution in large cities. Vietnam has around 10 large cities, of which Hanoi, the capital, and Ho Chi Minh City, the financial centre, are the most populous and most commonly blamed for urban air pollution (Hoang et al., 2017) and poor waste treatment (Schneider et al., 2017). Every day, the residents of both cities breathe 10 times the amount of dust recommended under World Health Organisation (WHO) regulations (Hoang et al., 2017), while generating average municipal solid waste of 0.9-1.3 kg per person per day. The total population of Vietnam reached 97 million people in 2018, of which 70% are aged under 35 years, the highest rate in the region at the same income level (World Bank). The country's population appears to be growing at a constant rate, and Vietnam is predicted to become the 14th most densely populated country by 2024 (Schneider et al., 2017), and to reach 120 million before levelling out around 2050 (World Bank).

The country is currently facing a variety of environmental challenges not only in its major cities but also in almost all its provinces, including water pollution, marine plastic pollution, air pollution (The World Bank), and a lack of waste classification and nationwide recycling, meaning that the government and its citizens have a common obligation to protect the nation's ecosystems. Moreover, Vietnam's current environmental problems are both harming human health and life in polluted and contaminated areas and limiting the country's economic development. Indeed, pursuing and implementing environmental goals is not only a matter of urgency for safeguarding Vietnam's natural environment but also a requirement and indeed a pre-condition for Vietnam to reduce its development gap and enhance the capabilities of its enterprises in the context of building and implementing the CPTPP.

At the country level, the Vietnamese government has affirmed its commitment to ES goals at the 2050 horizon. ES is defined as a priority in the 2016-2020 Socio-Economic Development Plan (The World Bank) and in the Green Growth Strategy at the 2050 horizon. The green areas highlighted include green technology, green construction, urban ecology, the

green economy, green products, sustainable consumption, and green jobs. Additionally, the legislative system is currently being revised to attract more foreign investment (with measures including tariff reductions and tax incentives). Alongside this, stricter inspection and monitoring will be conducted on FDI projects. More comprehensive policies and action plans for the environment are expected to be widely adopted and implemented at the micro level.

At the firm level, businesses operating in a range of industries (e.g. food and beverage, electronics, automotive) have also turned towards ES, on the one hand implementing environmental policies and practices to both meet their socio-environmental responsibilities and enhance their environmental capabilities to support their financial operations. A number of international EMSs are increasingly being adopted by enterprises and are now familiar to Vietnamese workers, with the most popular standards being ISO 14001, ISO 9000 and ISO/TS 16949. However, the greater external pressures (including from legislators, trade partners, and customers) are challenging enterprises to both enhance their socio-economic and environmental capabilities to meet international standards and harness their super dominance.

3.2.3. The Vietnamese automotive industry

Vietnam's car industry has grown rapidly over the past decade in response to the continuously increasing demand for cars in various segments (wise, passenger, commercial, private or state-owned). The first reason is population growth and the expansion of urban areas (Hoang et al., 2017), resulting in growing transportation needs within these areas and creating pressures to improve connection between suburban and more remote areas. The second reason concerns the growth of the middle class along with GDP and disposable income growth ([Vietnam briefing](#)). Although the Bus Rapid Transit (BRT) and Metro lines have been planned and are due to be installed and put into operation soon, with the first lines in Hanoi and Ho Chi Minh City, these systems will not be enough to meet citizens' public transportation needs and quench their thirst for private cars, even when both projects are completed.

In terms of environmental regulations, Decree No. 116/2017/ND-CP (which took effect on January 2018) along with Circular No. 03/2018/TT-BGTVT (which took effect on March, 2018) introduced greater barriers for quality improvement, emission limitation and vehicle imports of vehicles, causing a decrease in sales in 2017-2018 and a temporary setback for car makers. The phenomenon led to greater socio-environmental responsibilities, with car makers having to meet the high domestic demand and profit targets while also adhering to new regulations on quality and environmental standards. For example, the new emission standard, stipulated in Circular No. 03/2018/TT-BGTVT, introduced an upgrade from Euro 2 to Euro 4 and applies to both gasoline and diesel engines, causing vehicle prices to rise by approximately 30%. While the highest international standard is Euro 6, the decree stipulates that traders are only permitted to import automobiles if they can provide valid vehicle registration certificates issued by authorities from the countries of origin (e.vnexpress.net). Although this regulation is effective in ensuring that imported completely built unit (CBU) cars meet the Euro 6 standard, it also restricts the number of authorized importers. From a car manufacturers' perspective, there may be a shift in the short term towards imports from the more developed automobile manufacturing industries because of trade liberalization with ASEAN countries and CPTPP members (Schröder, 2017). However, in the long term, car suppliers and manufacturers are expected by the government to shift from assembling to manufacturing and to promote eco-friendly production ([Vietnam briefing](#)). In 2018, VAMA welcomed a new manufacturer, VinFast (a subsidiary of Vingroup, Vietnam's largest private corporation), increasing its membership to 19. With Vietnamese demand being higher for CBU cars than it is for CKD (completely knocked-down) cars, the challenge for car manufacturers is to make the necessary changes to their business model while both meeting sales targets and responding to socio-environmental needs.

3.3. Theoretical framework

3.3.1. Green recruitment and selection

3.3.1.1. The essence of GRS and perceived person-organisation fit

GRS is a novel strategic practice forming part of green human resource management (GHRM). A workable GHRM system has been defined in several recent studies (Ren et al., 2018; Roscoe et al., 2018; Shah, 2019) to encompass organisational practices in the relationship with environmental management for measurable design, evolution, innovation, process, operation, and maintenance functions of HRM and organisational citizenship behaviours that take into account the impact on the natural environment. The whole process is therefore selective and systematic in kind. This is critically to recruit the willingness of pro-environmental employees who are talents to a company to engage in organisational environmental performance.

Because CEP involves collective actions that take into account the voice of pro-environmental employees, GRS plays a key role by recruiting from within (job allocation, rotation, promotion) or from outside (vacancy filling). In other words, it involves employing the environmental performance of existing employees or seeking new environmentally responsible individuals (Wiernik et al., 2018). From a knowledge creation perspective, recruiting new employees who are truly pro-environmental talents is better in respect of disseminating environmental knowledge and mobilizing employees' environmental initiatives. By nature, recruitment occurs along an employee life cycle that encompasses attraction, recruitment, onboarding, development, retention and separation (Cattermole, 2019). Additionally, the recruitment process corresponds to job search, job entry, membership, and exit processes (Selden and Orenstein, 2011). GRS is no different from the traditional viewpoint as regards the life cycle. However, a GRS is characterized by an organisational environmental orientation in which green employers differ from each other in terms of the degree to which they are internally and externally environmental oriented. The current framework researches into an insight of GRS which facilitates job search and

recruitment practices before organisational entry and targets the right type of pro-environmental job seekers. In so doing, the framework reconciles different perspectives from the previous literature on the definition of fit. Such that, it is the argument on whether it is fit for purpose or a fit in terms of type of employee (Chapman et al., 2005). Based on social identity theory and cognitive science, in the followings, I will define the right type of pro-environmental talents who fit with the employer and how it is possible in a GRS context.

First, the environment is an integral part of organisational routines and job roles, with human factors accounting for most of the determinants of both the continuity of and constraints on (Bloodgood, 2019) the reproduction of organisational practices through organisational learning and knowledge creation. The literature on recruitment has identified a wide range of personal attributes that are antecedents of perceived attractiveness leading to job pursuit behaviour and job acceptance behaviour. These antecedents include personal values, attitudes, identity and capability system in correlation with job seeker' self-representation and hiring expectations. These within-individual factors interact and may compete with other organisational and contextual factors during individual assessments of person–organisation fit, which can be actual (objective) or perceptive (subjective) (Dineen et al., 2002). Fit has often been examined in the literature through value congruence, personality congruence, work environment congruence (Westerman and Cyr, 2004), person-people fit (Billsberry, 2007), person-environment fit (Vianen, 2018; Barrick and Parks-Leduc, 2019), person-group fit (Billsberry, 2007; Li et al., 2019), and person-vocation fit. Notwithstanding in the limited degree of value congruence, a body of research (Chapman et al., 2005; Collins, 2012; Deneen et al., 2002; Schreurs and Syed, 2010; Westerman and Cyr, 2004) indicates that attitude and the activated identity that often emerges at a late stage in the participant assessment process mediate between the interaction of those factors and perceived attractiveness. Attitude refers to how the person views significant factors that affect their choices, and this impacts subjective person-organisation fit through the availability of perceptive information. In this respect, the greater the tendency of an individual to remain positive or to maintain his or her positive attitude towards overall assessment, the more likely it is that he or she will be attracted to the recruitment. Alongside this, identity refers to the

person's identification with the employer and often involves a concept of self that the person wishes to become or maintain. In the current context, the concept is referred to as transitional identity (Collins, 2012). Some researchers conceptualize this identification in terms of perceived familiarity (Schreurs and Syed, 2010) or perceived similarity (Devendorf and Highhouse, 2008). However, this conceptualization overlooks the process of transition in job seekers' perceptions and is inadequate for identifying the similarities and differences in identity systems that are essential when explaining a job seeker's movements or persistence in reality (within his or her cognitive field) and the discrepancy between what a job seeker finds attractive and what he or she is seeking for. For example, a study by Billsberry (2007) found no significant differences in the effect perceived attractiveness between two comparable groups consisting of participants looking for the same type of work. However, it is still unclear whether the person-vocation fit factor inflates the two constituents of value fit as well as the impact of personal desirability bias. Likewise, the extent to which perceived fit and attraction effect alter job pursuit behaviour has yet to be fully explored.

Next, the transitional identity representing cognitive shifts (Collins, 2012) indicates "who a job seeker wants to be", which is congruent with an organisational identity that people at the employing organisation want to construct from making sense of their organisation (Few and Few, 2018). Personal identities vary in salience (Gatersleben et al., 2014) and in different environmental contexts and are known to represent a broader concept that incorporates the person's values and to predict pro-environmental behavior (Gatersleben et al., 2014). As a result, the current framework assumes that a transitional environmental identity guiding a job seeker's perceived OAE and job pursuit behaviour needs to be salient in a personal identity system and to describe the person's ecological value and characteristic in order for it to be maintained given the information asymmetry during a GRS.

So is pro-environmental attitude. This concept varies, however, in the expression of the realized environmental identity. As an example, a study by Bissing-Olson et al. (2013) conducted in a workplace setting found that pro-environmental attitude positively and significantly predicts both daily task-related pro-environmental behaviour and daily proactive pro-environmental behaviour. Additionally, pro-environmental behaviours are not

predicted by daily activated positive affect but by daily unactivated positive affect. This means that the individual's self-initiated stable emotions are more secured for pro-environmental behaviours at work. Furthermore, the results of this study show that daily activated positive affect is not effective in the case of daily proactive pro-environmental behaviours among individuals with a more positive pro-environmental attitude. These findings suggest that individuals who develop more positive pro-environmental attitudes and stable ecological attributes are more effective in focusing on pro-environmental targets without being distracted by external affect. Furthermore, it is logical that environmental knowledge should positively moderate pro-environmental attitude. This knowledge can be accumulated from an individual's experience and actual environmental information communicated by the employer. For example, a study by Saeed et al. (2019) reported evidence that an employer's indications and emphases about the environmental aspects of the employee life cycle (GHRM dimensions) are positively related to pro-environmental behavior at work and that the state of individual environmental knowledge about global environmental issues positively moderates the relationship.

Taken together, the recognition of a pro-environmental job seeker about a right fit with an underlying green employer occurs once this one realizes a salient environmental identity describing "who this one wants to be at work" is being represented in the employer and its staff in a manner congruent with this one's pro-environmental attitude as regards the communicated CEP. In this sense, to attract is to activate the realization of targeted pro-environmental job seekers (already defined by personnel planning with selection criteria prior to a GRS, but not yet identified) simply by performing organisational pro-environmental behaviours which are of green organisational routine and duties and communicating in GRS about those organisational environmental aspects that are more salient in the description of the employer's environmental identity.

3.3.1.2. The pivotal role of pro-environmental candidate attraction

A GRS that focuses overwhelmingly on the fit strategy risks creating a negative perception among applicants, for example, applicant reactions to selection or organisational

image (Chapman et al., 2005). Additionally, a recruitment which fails to attract the right quality will lead to ineffective selection no matter how sophisticated the systems are (Chapman and Mayers, 2015). Furthermore, candidate evaluation process and inclusion criteria probably put candidates under pressure, maintaining their intention and motivation to continue is important. A professional eco-friendly candidate attraction which provides appropriate responses in a clear and timely manner and maintains connectedness with applicants (e.g. notification about selection/interview process, notice of reception, administrative office contact) without creating over-expectation is also important. This is part of pro-environmental signalling for GRS. Theoretically, for recruiting their positivity, attraction can be examined in relation to physical, cognitive, emotional, or psychological aspects (Saks, 2011). For the focus objective is to detect the right pro-environmental job seekers whose environmental attributes are of quality and hard-to-fake, current framework examines and promotes the cognitive and psychological process. Based on the tenet of signalling theory and cognitive science, pro-environmental attraction examined in current chapter is to be implemented in accordance with the effectiveness and efficiency fundamentals of management and aimed at gaining the engagement of the predefined pro-environmental talents, meaning their attention and absorption in the job role (Saks and Gruman, 2011). In addition, pro-environmental signalling in GRS is aimed at detecting the right ones who are compatible with the employer in pro-environmental attitude. Therefore, the next section explains the developmental phases of engagement targeted by CEP signals as well as the transitional mechanisms in job seeker's perceptions of CEP signals towards job seeker's perceived organisational attractiveness for environment. In so doing, the main concepts are defined and hypotheses are formed for investigation.

3.3.2. Concepts and hypotheses for investigation

3.3.2.1. CEP signals and pro-environmental message

Since the first essay on signalling theory by Spence (1973), scholars have developed many theories on signalling effectiveness devoted to the process of recruiting high-quality individuals. However, for the efficiency fundamental of management, the recruitment

message needs to be designed with organisational signals in order to destine the underlying quality candidates of positioned skills and abilities and to win quickly their notice, failing which the employer will lose their cognitive attendance for other signals available at the same time. Current framework views signals as those which are beyond the sensory cues to represent key concepts serving information collection and information processing, two activities in a job seeker's cognition (Cristofaro, 2020). For fit purpose, CEP signals that are informative in nature (Hilal et al., 2017) necessarily convey not only environmental management performance but also environmental operation performance (Trumpp et al., 2015) so that job seekers can notice both environmental implementation in line with environmental strategies and employee involvement in environmental management and operations. In this way, job seekers will be informed about the degree to which the employer is environmental oriented and values employee contribution to environmental performance.

However, due to the competing valence of multiple signals in the job market available to their field of attention (Drover et al., 2018), organisational signals influencing their decision to apply are first brought to their attention, to have their notice, and next, to attend their selective attention and, finally, to meet the sufficient level of judgemental confidence in their evaluation (Drover et al., 2018). Pro-environmental talents are individuals who acquire environmental knowledge and prefer to work for companies that need to develop environmental knowledge with their core business. Here, effective signalling occurs when CEP signals convey two sets of environmental oriented goals, i.e. the employer's and the targeted's. To this end, CEP signals or CEP concepts in the presentation of written notice should be organized in a systematic processing (Drover et al., 2018) to avoid cognitive errors (Cristofaro, 2020). Accordingly, smart systematic processing (eco-design with identifiable environmental knowledge concepts) quickly activates the target's engagement and sequentially directs them towards supporting sources of more CEP information of the employer. This information satisfies their assessment in line with their need for a green employment relationship. For individual differences, the basic environmental needs that are more important can be instrumental, symbolic, or psychological in kind.

Additionally, from a cognitive attendance perspective, in the field of a job seeker's possible attention, there are many signals that are ignored, while there are only a few signals that meet this one's selective attention (Drover et al., 2018). Becoming engaged in the designated pro-environmental role equates to the individual's attention and absorption (Saks and Gruman, 2011). Attention is defined as "cognitive availability and the amount of time one spends thinking about a role" (Saks and Gruman, 2011), while absorption refers to the individual focus on the role and requires from the person's absorptive capacity, including the recognition, acquisition, assimilation, transformation and exploitation of external knowledge (Dzhengiz and Niesten, 2019).

To gain job seeker's selective attention, organisational pro-environmental signals must be observable (Connelly et al., 2011) and optimally identifiable. Furthermore, to be easily recognized by the target and to prevent a perception of *greenwashing* or of deception, the signal can be just lightly different within its bounded environment (e.g. a bold phrase in a plain text). This type of design satisfies both the effectiveness and the efficiency of management, especially in the popularity of e-recruitment (Selden and Orenstein, 2011), an important practice in GRS by which the recruiters post recruitment announcement and screen applicant profiles on online job portals.

Current framework focuses research on honest signalling in a consistent manner, which describes the true ecological value of the employer. Therefore, CEP signals/concepts are to communicate about internal environmental orientation (Banerjee et al., 2003; Salvador and Burciaga, 2020) and internalization which are substantial rather than superficial integration of environmental practices in organisational routines (Testa et al., 2018). The aim is to help pro-environmental participants make inferences about the reality of the workplace and the employer's trustworthiness. Of these, job seekers' perceived trustworthiness is crucial in their assessment of the company, particularly when recruitment applies technology (Kotlyar and Karakowsky, 2002); this seems to be the most difficult work of recruitment.

3.3.2.2. Perceived organisational attractiveness for environment (OAE)

« Today's employees want to work for responsible employers » (Leidner et al., 2019). The assumption is that job seekers tend to prefer companies to whom ethic is important (Renaud et al., 2016) and where there is ethical code of conduct (Barrena-Martínez et al., 2015). The likelihood is high among generation Y or the current generation at work since they are well educated on sustainability knowledge at college/university and are aware of environmental risks. Likewise, the level of embeddedness of corporate greening is dependent on the developmental phase of GHRM and the company's strategy (Baumgartner and Rauter, 2017; Bombiak, 2019). Corporate sustainability strategy at the organisational level reflects the organisational attitude towards its relationship with the natural environment, which « comprises the complex web of environmental, social, cultural and economic factors, whereby all of these are related to sustaining a high quality of life on earth » (Engert et al., 2016). Chapters 1 and 2 showed that CEP can include environmental-related signals of corporate social performance that are indicators of employer attractiveness. This chapter anticipates that targeted job seekers' perceived signals about CEP, which are typically environmental oriented, will lead to their perceived OAE, defined as their overall assumption about the company as an environmental oriented and pro-environmental employer.

Hypothesis 1: Targeted job seekers' perceived signals about the company's CEP will lead to their perceived OAE

3.3.2.3. The transition from perceived signals about CEP to OAE

Mediating mechanism. Continue the research results presented in Chapter 2, this chapter anticipates that in an environmental oriented context, the perceptions of targeted pro-environmental job seekers are transitioned towards OAE via the pro-environmental activation of three perceptive mediators in the pro-environmental zone. The first mediator is perceived value fit, defined to demonstrate their agreeableness with the employer's ecological value and pro-environmental behaviour. The second mediator is perceived organisational prestige or anticipated pride, defined as their perception of the company's pro-social orientation in public as being environmental oriented and the spill overed feeling of

pride to work for such company that acts ethically and responsibly (Leidner et al., 2019). The third mediator is perceived favourable employee treatment, defined as encompassing their assessment of the current green reward system and of an eco-friendly workplace which meet with their approval.

Hypothesis 2: Signals about CEP predict job seekers' perceived OAE via three transitions, i.e. the job seeker's perceived value fit, perceived organisational prestige/anticipated pride and perceived favourable employee treatment.

Moderating mechanism. Honest signalling posits that signal effectiveness can be enhanced by signal honesty and signal frequency (Bird and Smith, 2005). Additionally, participants' assessment of the employer is based on all environmental information they observe, from which environmental cues will help them make inferences and determine the level of attraction (Dineen et al., 2002). In this respect, honest signalling with information about various dimensions of CEP demonstrating the employer's environmental management performance, the strategic level, and environmental operation performance, the operational level, provide the participants with an overview of the employer's environmental identity and current position within the environmental sustainability domain. Meanwhile, based on systematically processed environmental cues, the targeted pro-environmental talents can infer what it would be like to work for that company (Jones et al., 2014) or the unobservable organisational factors contingent on the degree of authenticity of the employer's observable truth, by which the employer expresses their self with honesty and integrity (Saks, 2011). However, these cues must be consistent with each other in order to eliminate discrepancies and reduce information asymmetry. Therefore, this chapter anticipates that honest signalling needs to be true to the employer's environmental oriented reality and implemented in a consistent manner. It follows that targeted job seekers' perceived signal honesty and perceived signal consistency will positively moderate the relationship between CEP signals and perceived OAE during the assessment.

Hypothesis 3: Targeted job seekers' perceived signal honesty and perceived signal consistency positively moderate the relationship between CEP signals and their perceived OAE.

3.4. Method used to conduct the empirical study and collect the data

3.4.1. Study design and execution

A case study is contextual and is often used interchangeably with a qualitative approach. It is frequently used to test a phenomenon, a conceptual model in the real world or to conduct an in-depth study of single person, group or community (Merriam and Tisdell, 2016, p. 37). Given recent phenomena in the automotive industry, a case study is well suited to the purpose of testing the effect of the « Handicap » principle. This study was systematically designed of sufficient rigor in terms of setting and the participant recruitment process, thus ensuring that the empirical process is transparent and replicable (Aguinis and Solarino, 2019).

To explore job seekers' perceptions and test the hypotheses, a focus group method (Kidd and Parshall, 2000; Onwuegbuzie et al., 2009; Wibeck et al., 2007) was adapted to facilitate participant interaction (Belzile and Öberg, 2012), with the design involving three sessions through which CEP signals from an environmental oriented carmaker were delivered in an honest and consistent manner of sufficiency to facilitate group discussion. The carmaker was identified among a group of firms in VAMA who revealed environmentally related signals on the internet. Research on this carmaker using a focus group approach was approved by this enterprise. Importantly, to confirm the preliminary condition of the study, several individual interviews with employees in key positions within the enterprise were conducted prior to the focus group to confirm a preliminary condition of the « Handicap » principle: (i) the company under investigation necessarily pursues environmental goals, is currently implementing CEP practices or is planning to do so, and (ii) it communicates about these practices within its community, including its potential job seekers. In brief, two studies were designed in logical order as follows:

3.4.1.1. Preliminary study (Employee interview)

Objective: To explore current CEP practices at the carmaker and the degree to which the enterprise communicates about CEP to potential job seekers

Research questions:

- [1] What CEP practices are currently implemented by the enterprise?
- [2] Does the enterprise communicate CEP to potential job seekers in general and to university students in particular?
- [3] How does the enterprise signal about CEP?

Method: Individual qualitative interviews coupled with documents provided by participants or obtained from the firm's website and site photos taken at the factory site

Interviewees-Participants: Key positions including a senior environmental manager, a senior HR manager, HR recruiting manager, and marketing and public relations staff. The criteria used to recruit participants are shown in Table 3 below. These participants had no relationship with the researcher-interviewer.

Table 3: Criteria used to select participants at a firm

Position	Nature of position	Seniority (Years with the enterprise/position)	First contact required	Other requirement
Managing director/ Environmental manager	To have a good understanding of the company's orientation towards ES and the associated strategy and environmental policies. To understand and manage environmental operational practices	At least 10 years	Email and cell phone number supplied by the enterprise	Not in a close relationship with the researcher
HR director/ Recruitment manager	To plan recruitment and manage all recruitment activities	At least 10 years	Email and cell phone number supplied by the enterprise	Not in a close relationship with the researcher
Recruitment staff	To understand the stages of recruitment and the associated procedures, to be responsible for or involved in recruitment activities in the early stages including attracting and generating candidates	At least 3 years	Email and cell phone number supplied by the enterprise	Not in a close relationship with the researcher
Marketing staff	To understand marketing plans, especially through recruitment. To understand environmental-related PR/social media.	At least 5 years	Email and cell phone number supplied by the enterprise	Not in a close relationship with the researcher

Interview length: 30-60 mins each

Interview type: Audio-recorded semi-structured interview, face-to-face meeting at the enterprise. The structured questions designed for the interviews are shown in Table 4 below.

Table 4: Structured questions used in employee interviews

Objective of interview	Structured question
Interview 1: Senior Environmental Manager Duration: 27 minutes	
<p>- <i>Objective:</i> To explore</p> <p>[1] The organisational orientation towards ES</p> <p>[2] CEP practices currently implemented at both strategic and operational levels</p> <p>[3] Whether the enterprise communicates about CEP</p> <p>- <i>Why this position?</i></p> <p>Senior environmental managers have a good understanding of the organisation's vision, strategies, and environmental goals as well as CEP at the strategic level. The environmental manager is aware of environmental plans and CEP at the operational level</p>	<p>[1] Could you please share Y's opinion of ES?</p> <p>[2] What are your enterprise's environmental goals in the long term and in the short term?</p> <p>[3] What is your enterprise doing to achieve these goals?</p> <p>[4] How does Y communicate environmental issues/viewpoints to the community?</p> <p>[5] My understanding is that the effect of Decree No. 116/2017/ND-CP has been to cause some car makers to suffer a temporary setback over the last two years, such that car sales have decreased significantly. Has your enterprise encounter the same difficulty? Do you think this situation has affected your company's environmental performance to a greater or lesser extent OR that it creates obstacles in terms of the pursuit of environmental goals in the long term?</p>
Interview 2: HR recruiting manager Duration: 45 minutes	
<p>- <i>Objective:</i> To explore</p> <p>[1] Recruitment stages currently implemented, especially at the initial stage where the recruiter engages in more activities with job seekers/candidates</p> <p>[2] Practices to attract job seekers, especially students</p> <p>[3] How CEP is communicated/signalled to potential job seekers</p> <p>- <i>Why this position?</i></p> <p>The individual in question is responsible for recruiting activities and therefore understands the detailed procedures and action plan. The individual also interacts more with job seekers in the early stages of recruitment and often has a method of attraction</p>	<p>[1] Could you please share the current environmental practices/programmes at Y?</p> <p>[2] Are all employees involved in these practices?</p> <p>[3] Could you please briefly describe the different stages of the recruitment process at Y?</p> <p>[4] Given that final-year students should be a valued source of recruitment, how does your enterprise communicate/interact with these potential employees?</p> <p>[5] What practices are applied to attract job seekers, particularly final-year students?</p> <p>[6] Are environmental issues designed to be communicated to job seekers during recruitment and by which manner?</p> <p>[7] How do you deliver these environmental messages to potential candidates when interacting with them?</p>
Interview 3: Senior HR manager Duration: 60 minutes	
<p>- <i>Objective:</i> To explore</p> <p>[1] Whether environmental goals are embedded in HR practices</p> <p>[2] Whether the enterprise takes into consideration employee involvement in CEP practices</p> <p>[3] The propensity to conduct green recruitment</p> <p>[4] The extent to which the enterprise values pro-environmental candidates</p> <p>[5] The propensity of the firm to communicate about CEP during recruitment</p> <p>- <i>Why this position?</i></p> <p>The individual in this position works closely with other departments on environmental operational performance and</p>	<p>[1] Could you please share any of Y's environmental goals that you know of?</p> <p>[2] Could you please share how HR practices support or can support environmental performance?</p> <p>[3] What HR practices are aimed at encouraging and promoting employee participation in environmental performance?</p> <p>[4] Could you please briefly describe the different stages of recruitment at your enterprise?</p> <p>[5] Do you think that company branding and marketing along with recruitment have an effect on attracting job seekers?</p> <p>[6] How is environmental information disclosed or designed to be disclosed during recruitment?</p>

personnel planning, and therefore has a good understanding of the organisation's views and HR strategies in relation to environmental issues. The individual in this position manages overall HR activities and performance, understands the criteria used to select candidates and gives direction for recruitment activities.	
Interview 4: Marketing staff and PR staff Duration: 30 minutes	
<p>- <i>Objective:</i> To explore</p> <p>[1] Marketing plans in relation to promoting the green image and green organisational prestige over the past few years</p> <p>[2] The propensity of marketing about CEP practices during recruitment, especially practices targeting students</p> <p>[3] The propensity of pro-environmental marketing impacting candidate attraction</p> <p>- <i>Why this position?</i> PR & marketing staff have an overview of current marketing activities relating to environmental issues and organisational communication (through advertising, social media, etc.) on CEP practices during recruitment.</p>	<p>[1] Over the past 5 years, has your company engaged in marketing activities designed to promote its green image or its prestige?</p> <p>[2] Is there a specific strategy or principle underlying your approach to marketing?</p> <p>[3] Is there a specific strategy or principle in place to protect the company's image?</p> <p>[4] Could you please briefly describe your enterprise's environmental targets and current environmental programmes?</p> <p>[5] To what extent are company's employees entitled to participate in those activities?</p> <p>[6] How are these environmental issues disclosed to the public (especially on social media and other online platforms)?</p>

Conduct of the interviews:

Before the interview. Having obtained the company's approval for access and having been issued a certificate of ethics by CÉRUL for this thesis project, employee-participants were recruited with the support of an HR employee acting as gatekeeper. Several short discussions were conducted via email or over the phone to introduce the research project and objectives and to exchange information about employee-interviewee recruitment. In total, 5 employees agreed to participate. Each interview was conducted in daytime working hours at the company's office and factory, at the date and time chosen by the interviewee. Before starting the interview, each interviewee was given a consent form bearing my signature and explanations of the key concepts and content included in the form. Any questions raised by the interviewees were answered to ensure that they had a clear understanding of the nature of the interview and their participation in the project. Interviewees were also informed that the interview would be audio-recorded. The consent form was approved by CÉRUL and stated that the information provided by the participants would remain confidential and the data would be protected. Two copies of the form were signed, with each party keeping a copy. All employee-interviewees signed the consent form prior to engaging officially in the interview.

During the interview. The interviews were conducted face-to-face in the company's cabin office, meeting room or guest room. I was dressed formally in regular shirt and trousers, in line with the company's working environment. Use of accessories and make-up was decent. Although the interview format was designed to involve a formal meeting, an effort was made to create, at times, a comfortable environment for the interviewee involving an open conversation with unstructured questions, pleasant responses and reiterations to ensure their willingness to share information and environmental knowledge. The discussions during the interviews were recorded using a voice recorder.

After the interview. A gift worth 100 CDN was presented to each participant. The following day, a thank you email was sent to each participant to acknowledge their participation in the study and to express my appreciation for their time. The audio recordings were transcribed, with the transcripts then being used as data for analysis in the next stage of the study.

3.4.1.2. Focus group

Main objective: To test the hypotheses of the conceptual framework in a real business context

Research questions for data coding and hypothesis testing:

- [1] How do pro-environmental job seekers perceive the enterprise's signals about CEP?
- [2] Do they think that the enterprise is an attractive company/employer from an environmental point of view?
- [3] How do their perceptions of CEP signals increase/change if more pro-environmental signals are produced/perceived?
- [4] How do their positive perceptions of CEP signals increase if those signals are perceived as more honest?
- [5] How do their perceptions of OAE increase if those signals are perceived as more consistent?

Method: Mini focus group (Onwuegbuzie et al., 2009; Wibeck et al., 2007)

Length of discussion: 60-90 mins

Type of group: 2 recorded mini focus groups (3-4 participants/group)

Focus group participants: MBA students (group 1) and final-year undergraduate students (group 2). Group members for discussion: The researcher–moderator (me) presented the questions and administered the meeting as per the designed scenario (see Table 6 below) and focus group participants as well as an HR staff member from the enterprise who participated in a short interaction with the focus group to provide more information about CEP in Session 3 at my invitation.

Participant recruitment: Participants were recruited from within various MBA programmes and the carmaker's targeted universities in Hanoi, Vietnam, through campus visits and recommendations. Once several email lists had been compiled, an email (based on a template approved by CÉRUL) was sent to each student to invite them to apply and participate in the focus group (Annex 1). A class visit was also arranged with the agreement of the professor in charge and the monitor to provide a short introduction about the purpose of the study and call for participants. To apply, recipients were invited to submit a CV along with their student ID and national ID information via email. Upon receiving the applications, discussions were held over the phone or via email to exchange further information before sending out an official letter of invitation to focus group, indicating the precise time, date and location of the event and enclosing a consent form approved by CÉRUL. The date and time were chosen based on the common availability of all members. In the letter, recipients were invited to carefully read the consent form and meeting requirements. Finally, seven participants confirmed their attendance. The focus group participants were potential job seekers in Hanoi, Vietnam. Group 1 was comprised of experienced workers who are also enrolled in an MBA programme along their job. Group 2 was comprised of final-year university students who had completed their university course, were awaiting graduation and had some work experience through part-time jobs. All participants were Vietnamese women and showed an awareness of environmental issues or had a pro-environmental background. I had never met the participants and did not know them prior to the meeting.

Focus group execution: The focus group meeting took place in a private rented formal meeting room used for study and conferences (see Table 5 below). Two focus group meetings were conducted on two consecutive week-day evenings and followed the same scenario (see Table 6 below). I acted as researcher–moderator in both meetings.

Table 5: Room setting and meeting requirements

No.	Category	Setting	Objective
1	Room type	An environmentally friendly room with glass windows and glass walls reducing ambient noise with space for 8 people and high-speed internet access	To create a friendly atmosphere and reduce the sense of discomfort (if any) at being recorded
2	Table	Round table arrangement (tables with matching chairs are in sync)	To facilitate group discussion, visibility, and individual engagement
3	Equipment/appliances	Individual iPad with preset Wi-Fi	To go online and conduct research activities (see Table 6)
		White board and TV screen	To present ideas if needed
		Voice recorder and time counter	To record the meeting providing data for analysis and for time management
		Name tag placed on the table in front of each participant	- To facilitate identification of participants during discussions - To identify who said what
4	Offerings during the meeting	<ul style="list-style-type: none"> - A cup of tea or water, fruit and eco-friendly tissue paper were arranged on the table in front of each participant - Water, tea, and coffee were served in the common area by the host service (outside the meeting-room) - Mini tea break - A pen and a sheet of paper were placed on the table for each participant (any paper used had to be handed over to the researcher at the end of the meeting) 	<ul style="list-style-type: none"> - To create a calm atmosphere - To supply basic provisions - To enable note-taking
5	Researcher's dressing style	Formal style used for conferences but designed to seem friendly to students	To create a university-friendly image and a perception of professionalism and credibility
6	Restrictions	<ul style="list-style-type: none"> - No smoking, no stimulants, and no alcohol use allowed in the 8 hours prior to the meeting and during the meeting - No bringing food to the group discussion - No telephones: during the meeting, participants were required to leave their personal mobile phones outside the room in a container near the door and to leave their personal belongings (electronic devices, bag, etc.) to an authorized person (a private security guard) - Entrance door closed during discussion time 	<ul style="list-style-type: none"> - To ensure self-control and wakefulness in the participants - To ensure maximum focus on the research object and avoid disruption from outside - To avoid bothering non-smokers - To respect the non-smoking meeting area of the host service - To keep the room clean
7	Giveaway	A souvenir bearing the logo of Université Laval and 500,000 VND put in an envelope were packed together in a gift bag and given to each student participant at the end of the meeting.	<ul style="list-style-type: none"> - To thank the participants for participating in the study - To compensate for their time - To create a good impression

Table 6: Focus group scenario

Time in minutes	Action/Activity	Main presenter
Before the discussion – Getting started		
45 mins before the main activity (Audio and video recording turned on)	<ul style="list-style-type: none"> - Participants are welcomed and their identities are checked by an assistant receptionist. - The participants are free to choose where they wish to seat, albeit within view of the camera. - Greeting. - The researcher's role is briefly restated, the research project having been provided with an ethical certificate. - The objective of the focus group is explained, having been granted permission by an enterprise (with its name and industry remaining concealed). The purpose of surveying individuals' real thoughts and feelings towards their pro-environmental signals is also explained. - Signalling theory and several English concepts (definition of signal, definition of perception) are briefly introduced and explained. - The principles applied to maintain participant confidentiality, personal information sharing, and data preservation and protection are reiterated. - Re-explain shortly on the style of discussion and the type of activity to follow several pre-designed questions/request and to respect the timeframe - The consent form is presented to the participants for signing. - Participants are invited to ask questions and their questions are answered before reaching an agreement. - The Consent Form is signed. 	Researcher– Moderator
Session 1: 5-minute online research		
00:00 – 05:00	<ul style="list-style-type: none"> - The participants are invited to introduce themselves briefly (name, current occupation, reason for joining the focus group, interest in/concern for environmental sustainability issues) 	Participant
05:00 – 10:00	<ul style="list-style-type: none"> - The participants are invited to study the carmaker's website on their own, with an emphasis on community activities (Individual iPads with high-speed Wi-Fi and 4G mobile are ready for use and placed on the meeting room table) 	Participant
10:00 – 20:00	<ul style="list-style-type: none"> - The participants are invited to provide individual ratings on an individual questionnaire during the session (Annex 4) before discussing the following topics: <ul style="list-style-type: none"> [1] The degree to which they think/feel the company is environmentally attractive and the reason why they do think so; [2] How they perceive about the environmental-related information [3] Whether and why they feel those signals are honest. [4] The extent to which they find those signals consistent with each other. 	Participant
Session 2: 10-minute online research		
20:00 – 30:00	<ul style="list-style-type: none"> - The participants are invited to continue their examination of/to conduct more online searching individually on the company's environmental-related information on the company website or outside company website. - Group information sharing is allowed at the same time. - If requested, participants can be given more time. 	Participant
30:00 – 40:00	<ul style="list-style-type: none"> - The participants are invited to give their ratings on the same questions (Annex 4 – Individual questionnaire during the session) and to express/explain the extent to which their perceptions of those signals and the enterprise change/persist. - Further group discussion to facilitate in-depth understanding and collective sense-making. 	Participant
SHORT COFFEE BREAK (15 MINS)		
Session 3: Short interaction with an HR staff		
40:00 – 50:00	<ul style="list-style-type: none"> - The researcher invites the HR staff to enter the meeting room and give a short presentation on the enterprise and CEP information (the researcher had no request for the design of the presentation content) 	Invitee
50:00 – 60:00	<ul style="list-style-type: none"> - Questions and answers (Q&A) between the participants and the invitee about environmental-related information and the information provided by the invitee in relation to the carmaker (each participant is invited to ask one question) - The real time is a bit flexible following the actual flow of Q&A. - After the Q&A, the researcher thanks the invitee for attending and the invitee leaves the room. 	Invitee and participant
60:00 – 70:00	<ul style="list-style-type: none"> - The participants are invited to give their ratings to the same questions (Annex 4 – Individual questionnaire during the session) and to express/explain the extent to which their perceptions of those signals and the enterprise change/persist. - Group discussion continues with the purpose of surveying and observing the impact of more signals and the presence of the HR staff on the participants' pre-existing impressions, 	Participant

	especially their perceptions of signal honesty, signal consistency and organisational attractiveness for environment. - The real time follows the actual flow of opinion expression	
Towards the closing group discussion		
70:00 – 80:00	- The researcher informs the participants about closing time. - Group discussion continues.	Participant and Researcher-Moderator
80:00 – 90:00	- The researcher invites the participants to express their personal viewpoints. - Group discussion continues. - The researcher thanks the participants for their involvement and discussions. - The researcher hands out gifts to each participant and expresses her appreciation for their participation.	

(Note: As per the approach designed for each focus group, the researcher-moderator purposefully left the room to deliberate group discussion for several minutes in Session 3 after the HR staff had left)

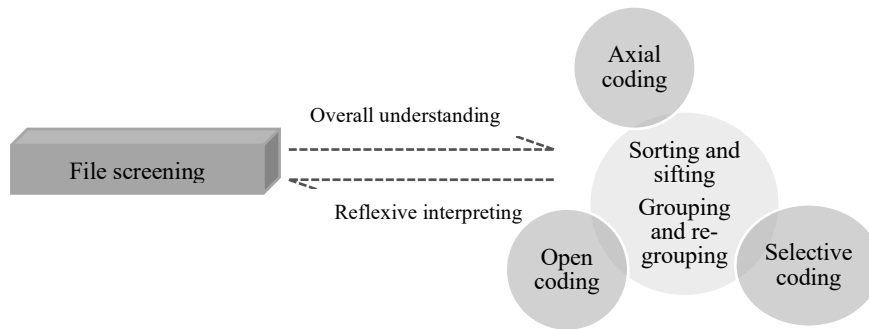
3.4.3. Data transcripts

All the recorded files were transcribed verbatim . The employee interviews and focus group discussions conducted in Vietnamese were then translated into English by a translation service provider under a contract signed between me and the provider that included a provision on data confidentiality. All clues relating to the identity of the firm and the participants were hidden and coded in the files sent to the translation service provider. I remained in contact with the translators throughout the translation process until an agreement was reached on the English version. After that, I performed a final proofreading of the texts by re-listening to the recordings over and over again while reading the transcripts (Parameswaran et al., 2019), repeatedly checking and rechecking the English transcripts to ensure all the data had been verbatim translated and no data were omitted.

3.4.4. Data coding

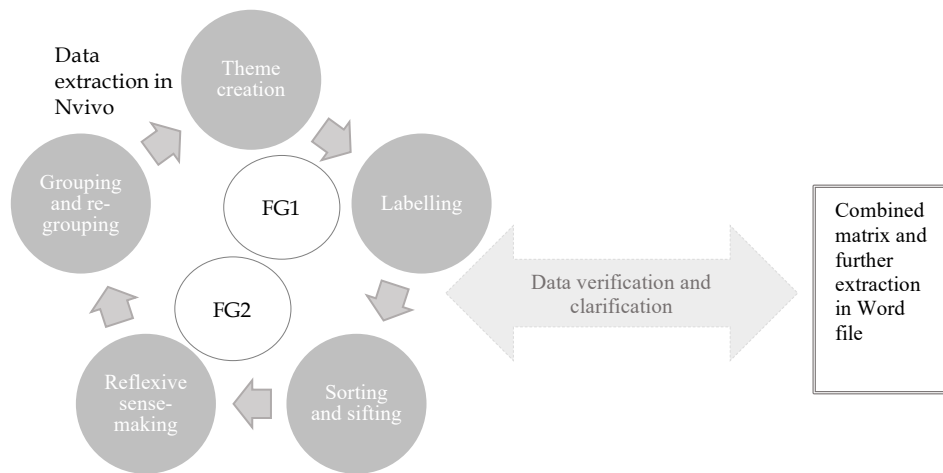
For Study 1, the primary data for coding include transcripts of employee interviews, while the secondary data include documents provided by employee-interviewees or obtained from the company website (texts, videos, images, artifacts) accessed in April 2019 and site photos taken during my visit to the carmaker's factory. For Study 2, the data for coding include the focus group recordings along with the individual questionnaires used in each session (Annex 2). After having completed the data transcription and translation process, I distanced myself from the data for a period of two months before starting the coding work (which took three months) to ensure I approached the data with a fresh eye.

Figure 3: Open coding in the preliminary study



For the preliminary study, the open coding technique was used for data coding (see Figure 3 above), allowing the codes to emerge from the text. The process involved three phases: open coding, axial coding and selective coding (Blair, 2015), in which the central explanatory categories are labelled based on literature-based concepts and the main themes of semi-structured interview questions. Before getting started, I had accessed the text and read them over and over during the time of recording rehearsal, data transcription and translation so that I obtained already an overall understanding of the main issues at hand. My literature reviews on GHRM and environmental performance together with my work experience meant that I was able to make sense of the texts and the interviewees' ideas as a whole. Coding was performed theme-by-theme corresponding to the research questions of the preliminary study, so that the coding book comprised three main areas: (i) Current CEP, (ii) CEP communication and (iii) CEP signalling method. The process then began with line-by-line reading to identify the codes (categories) and their surrounding sub-categories, while also sorting and sifting the concepts (Blair, 2015; Chowdhury, 2015). Grouping and re-grouping while exploring new containing categories, sub-categories, and the links between them helped to yield precise data. The process was reiterated as I sifted through the various files for collective sense-making and verification to ensure no important details were overlooked. For sense-making, labelling and classification, coding was based on ongoing retrospection, data screening and interpretation from multiple facets (Chowdhury, 2015).

Figure 4: Open-ended explorative template coding in the focus group



For the focus group, an open-ended explorative qualitative data coding and analysis process was applied (see Figure 4 above). Since the study is a survey of participants' actual perceptions in a real-world business context, the coding process adheres the principle of data trustworthiness and allows for the emergence of new dimensions (Elo et al., 2014). In other words, the idea is to let “the data speak for themselves”. The aim is to aid readers' understanding of the reasoning behind the participants' thoughts and what was actually happening in their minds rather than merely showing their votes, the idea being to bridge the gap between what people say and what they actually think and do (Chowdhury, 2015).

However, the coding agenda is more template coding (Blair, 2015), which is a systematic approach involving *a priori* codes drawn from my research project and implies a philosophical perspective. The reason for this is that the focus group discussion was pre-designed, meaning each part of the conversation is pre-determined based on a theme (the context associated with appointed activities-Table 6). Each unit of analysis and each question posed are put in order (see Table 6 above for the focus group scenario). By proceeding in this way, there is a fit between the material (content) and the communication model, along with a setting that determines in which part of the meeting participants' inferences shall be made (Kohlbacher, 2006). The main themes are labelled after the model concepts and are coded in terms of both positive and negative tendencies to observe differences in kind and degree

(Ragin, 2000), the individual trends as well as the factors impacting the move of participant's perception. The final coding book comprised 7 themes labelled as follows: (i) Attractiveness, (ii) Honesty, (iii) Consistency, (iv) Anticipated pride, (v) Information, (vi) CEP signals, (vii) Individual trend in positivity and negativity. For the first three themes associated with the main concepts of the model (Perceived organisational attractiveness for environment, Perceived signal honesty, Perceived signal consistency), to probe the categories and sub-categories, participants' responses to the structured questions reproduced in each session (Table 6: focus group scenario) were tracked in terms of the extent to which they came to make inferences. For the other themes, the text was extracted from respondents' opinion sharing, answers, reactions, confirmations, and reconfirmations addressing the subject of the theme. The next steps were similar to Figure 3 since qualitative data analysis is by nature cyclical and includes recursive data analysis (Parameswaran et al., 2019). The data was also coded in slices to identify changes and viewed from an encyclopaedic perspective, the reasoning behind the numbers can only be figured out at the very end of the process (Chowdhury, 2015).

This focus group provided an insight into participants' mind. I kept aside personal desirability bias while avoiding any misleading coding which is reliant on the common phenomenon and respecting data trustworthiness (Elo et al., 2014). In so doing, each focus group text was coded separately and the two coding books were next combined by identifying similarities and differences. During the process, the formulation of definitions was based on interpreting collective sense-making of participants' perceptions, which were explanation-based following respondents' explicit descriptions and dialogue and were deriving meanings that went beyond the literal content of the text (Rabinovich and Kacen, 2013).

In both studies, NVIVO software was used for data extraction and category sorting. The coding matrix was then converted into a word file to combine the results, to reduce the complexity and conduct further techniques of analysis. Various popular techniques for identifying themes and sub-themes introduced by Ryan and Bernard (2003) were adopted, including cutting and sorting, searching for repetitions, transitions, similarities and differences, overlaps, linguistic connectors, and metaphors. Additionally, several other

techniques were used to identify and observe individual transition tendencies, consisting of individual emphases on certain factors, information tracing behaviour, expression of extremes/absolutes, confirmation and reconfirmation, personal consideration, and self-explanation. In the event of a discrepancy between the English translations and the Vietnamese transcripts, I went back to the recorded files to verify and clarify the data. Data clarification can also be checked by asking for confirmation from interviewees. All step results are recorded for tracking data and process.

Chapter 4

RESULTS OF THE EMPIRICAL INVESTIGATION

Objective: To construct the prediction of the « Handicap » principle model for managing green recruitment and selection and provide directions for future research

Method of analysis: Qualitative content analysis

4.1. Results and analysis

4.1.1. Preliminary study (employee interview)

This study aims to explore the propensity of CEP implementation at the carmaker and the degree to which the company signals about CEP to its community and potential job seekers. The company's name and identity are coded to ensure confidentiality and to protect the identity of the participants. The carmaker will be referred to hereafter as Y. Data analysis is tri-angulation using multiple sources of data from mixed methods (Jonsen and Jehn, 2009; Yin, 2013). Accordingly, the results reported herein are in the language of researcher using narrative method (Langley, 1999) and from a researcher's critical viewpoint.

First, the results confirm the preliminary condition of the « Handicap » principle, meaning that Y has been implementing CEP at both strategic (EMP) and operational (EOP) levels. Four main EMP categories and four main EOP categories are identified. Table 7 below provides a summary of this finding.

Table 7: Current Corporate Environmental Performance practices at Y

CEP	Category	Dimension/Description	Data source							
			1	2	3	4	5	6	7	8
EMP (4 categories)	Organisational orientation towards ES	Green business	X	X		X	X	X	X	
		Organisational environmental objectives:								
		<i>Long term</i> - Clean technology - Eco-friendly and smart products for car users	X	X			X			
		<i>Short term</i> - Lowest emission rate - Zero waste and energy reduction	X	X	X		X		X	X
	Published environmental policy	ISO 14001 version 2015					X	X		
		Y Production System of 7 elements associated with EOS (Environment Operating System), an owned system of Y for environmental management			X		X			X
		Continuous planning and assignment			X	X	X			
		Published factory balance scorecard				X	X			
	Corporate environmental monitoring	Periodic review and reporting			X	X	X			X
		ES is the duty of everyone and is integrated into core business processes, production, and the workplace environment	X	X		X	X	X	X	X
EOP	Green training and knowledge sharing	For the community: - Driving skills instruction programme	X	X			X	X		

(4 categories)		- <i>Spill-over environmental knowledge via employees</i>									
		For employees (on/off the job): - <i>Training on environmental protection for every employee</i> - <i>Training routes for staff starting from one-day orientation during employee induction for new recruits</i> - <i>Corporate mentoring programme with global training partners</i> - <i>Accessible Y library</i> - <i>Experience and skill sharing among co-workers</i> - <i>Personalized employee feedback via HR online portal</i>			X	X	X		X	X	
	Green rewards	Green pay for eco-initiatives and environmental-related community activities	X	X	X	X	X		X		
		Green recognition			X	X					
		Travel support for work and business trips	X	X	X	X					
		Green work-life balance activities			X				X		
		Green and eco-friendly working area			X	X					X
	Green employee involvement	Departmental empowerment for work initiation and responsibility	X		X	X					
		Involvement of employees in planning, organizing, and holding environmental-related community activities	X	X	X						
		Employee information sharing and feedback encouragement	X	X		X					X
		Skip-level meeting				X					
	Environmental-related community activities	Environmental-related charity and contributions to local communities	X	X	X	X	X	X			

Note:

- Sources 1 to 5: Employee interviewees 1 to 5 (PR & Marketing staff, HR senior manager, HR staff, Environmental manager)
- Source 6: Company website at the time of data collection
- Source 7: Documents shared by employee participants
- Source 8: Photos captured at factory via site visit

4.1.1.1. EMP – Environmental management performance

Y, like many other subsidiaries, follows its global orientation towards ES and the regional green business strategy. The company's environmental orientation involves a clear environmental vision, with short-term and long-term goals. Its ES strategy also follows its mother company, not exclusively because of the alignment strategy, but also because Y and regional headquarters are not in charge of product design, which is managed by the mother company's Product and Development division. Accordingly, the long-term strategy is clearly defined with the Green Business, with the company committed to a future of clean technology

with eco-friendly and smart products for car users. Y's spirit is illustrated by its slogan and commitment to the environmental orientation has already resulted in some outstanding eco-developments, including engines with better fuel efficiency and new technology involving smart connectivity, flexibility, and user-friendliness. Meanwhile, their continuous improvement is observable in their endeavour to meet short-term environmental goals, including committing to the lowest emission rate, zero waste and energy reduction, which are implemented mostly in factories since production is more closely with such environmental matters.

CEP at the strategic level is also demonstrated in Y's published environmental policies, which are being operated under ISO 14001 and Y's own environmental management system. The company's operations are, as stated by two interviewees, HR senior manager and Environmental manager, "100% compliant with Vietnamese law". Its environmental policies and plans are comprehensively and transparently allocated and communicated to employees in the factory division, being governed by a corporate environmental monitoring programme characterized by (i) continuous planning and assignment, (ii) published factory balance scorecard and (iii) periodic review and reporting. Y's pro-environmental attitude is demonstrated in its environmental policy, « Environmental sustainability is the duty of all employees, not of some specific person », as noted by the senior environmental manager. ES appears to be integrated into its core business, production and workplace environment, underlining the company's environmental responsibility not only in terms of its business activities, but also to the community where it is located and operates and, crucially, to the lives of its people. As a carmaker, Y's pro-environmental attitude, as noted by one interviewee, PR & Marketing staff, "goes from the essence of its products" constituted by its brand pillars, which all lead to the enhancement of eco-capability. As a pro-environmental employer, the company's pro-environmental attitude is expressed in the company's care for the lives of others in the green workplace, with consideration given to staff health, cleanliness, safety, convenience and knowledge development at work, and this attitude is expressed in employees' daily green behaviours.

From the employee interviews and my visit to Y's offices, I identified various types of EMP applied across all departments, including both factory sites and back offices, and classified them into five categories, including:

4.1.1.1.1. Applied technology in administration

The company recently purchased a copyright software for their administration and replacing paperwork, which was previously very wasteful and time-consuming. As a result, the company now manages and approves its documents online using electronic signatures. This applies to staff at all levels, meaning that all staff have their own electronic signature, requesting, reporting and approving documents on the site.

4.1.1.1.2. Eco-reminders

For eco-workplace, people often remind each other to do things right rather than using strict monitoring and daily patrolling. The HR division applies some eco-reminder practices, such as automatic eco-reminder at the bottom of each email about printing, reminders about using electricity and water resources efficiently through notices in company meeting rooms, next to light switches, etc.

4.1.1.1.3. Generation of eco-initiatives

Y also encourages employee eco-initiatives by promoting contests, inspiring drawings in offices and green rewards for eco-initiatives. Eco-initiative generation is more active in the production division than in back offices because the factory has a *Kaizen* (continuous improvement programme) and “it is easier for the production division to improve”, as one PR & Marketing interviewee noted, “because of the nature of the division’s work”; as another noted, “at the paint shop, they have so many opportunities for doing the right thing for environmental protection”. Additionally, the company also takes eco-design into account for its offices and canteens to ensure people are as comfortable as possible at work in a way that saves time and energy and ensures order.

4.1.1.1.4. Energy saving

The implementation of energy-saving measures is taken seriously at Y. The company has annual targets and audit requirements associated with its corporate environmental monitoring programme. The overall target is decentralized to every department, and each department is responsible for managing and meeting its target.

4.1.1.1.5. Pollution and waste management at the factory

By their nature, car manufacturing and assembly processes generate dangerous waste. Pollution and waste management is conducted and controlled strictly in production processes and areas following ISO 14001 and Y's own production system regulations. Accordingly, waste classification and processing are managed to ensure that no harm is caused to people's health and there are no negative effects to its ecosystem. Y works with a third party to handle all production waste.

4.1.1.2. EOP – Environmental operational performance

While EMP reflects the company's environmental strategies, its EOP practices reflect the company's pro-social orientation in caring for the lives of its staff and the wider community where it operates, as well as for environmental leadership at all levels. This attitude is explicitly expressed in the company's motto. In so doing, Y's aim is to "become not only a company that works well with the community, but also a great company contributing its profits to society", said one interviewee. Overall, four groups of EOP were identified: (i) green training and knowledge sharing, (ii) green rewards, (iii) green employee involvement, and (iv) environmental-related community activities.

4.1.1.2.1. Green training and knowledge sharing

Y provides both on-the-job and off-the-job training to staff both regularly and occasionally depending on training needs and positions. Accordingly, the training

programme can vary among different departments. The company delivers training to staff about environmental protection on a regular basis, particularly in relation to environmental knowledge. Environmental instruction is also mandatory for all new recruits on their first day at work as part of their employee induction programme to ensure they understand the company's orientation, core values and fundamental requirements at work. In the case of engineering in particular, all contractors and their appointed staff coming to work with Y are introduced to Y's environmental regulations and are required to sign a commitment form with Y's environmental engineer in which they agree to comply with all those requirements and adhere to environmental rules as Y does. Occasionally, as reported by an HR staff member, the mother company also collaborates with university mentors or other training partners in delivering training programmes to staff relating to their job requirements. The company library is also open to every employee, providing staff with access a wide range of knowledge. The culture at Y is very favourable to knowledge sharing, a value that is assumed to be inherited from the founder's views on continuous learning, the motto of which is promoted in Y's office as are the company's values to ensure the company belief system is understood and maintained. As perceived by one interviewee whose years in service are equal to Y's age, knowledge sharing and support, especially for new employees, is a positive feature of Y's culture. According to him, Y is like another university where he learned a lot and received many supports from his seniors when he first joined. As an experienced staff member, he also shares his knowledge with junior members in a manner of no hinder. Another interviewee who also works in the Learning and Development department said that being able to work in the department gives him an opportunity to gain practical knowledge and to promote knowledge transfer to internal co-workers. As concerns HR, to facilitate employee feedback, the division has created an online HR portal where employees can share their personal opinions using their own account. Furthermore, Y's pro-social orientation is evidenced by Y long-standing driving skills instruction programme, through which Y trainers share their experience and driving skills free of charge to licensed drivers to teach them how to drive in an environmentally-friendly and fuel-efficient way. Additionally, they have also developed programmes involving eco-friendly car races for drivers in various provinces of Vietnam. Training courses on brand pillars are also delivered within the Y dealership system,

to either top management board or managers and salespersons. Y's objective is to ensure each staff to be an environmental ambassador within his or her family and community to spill over the environmental protection attitude.

4.1.1.2.2. Green rewards

Green rewards at Y are diversified and also take the psychological needs of staff into account. First, Y has a Benefits and Compensation programme that also offers rewards for employee environmental performance. In recent years, the company has been implementing a "Caring Programme" designed for all Y subsidiaries worldwide and that requires every employee to commit two working days (approximately 16 hours) to environmental-related CSR in the community area where Y is located while still being paid their full salary. These activities fall on working days and not on weekends or public holidays. In addition, to encourage eco-initiatives, Y and other regional subsidiaries have a common policy of paying employees for their submitted eco-initiatives up to a maximum of twice a year. A related measure is green recognition on the company's intranet or publicly within the firm. Additionally, the company provides transit cars for all staff travelling from Hanoi office address to the factory in other province whether daily or occasionally. An extra 9% of their salary is also paid for their time spent travelling by car for work. Likewise, a fleet of cars is available for staff on business trips. Second, the HR division has designed green work-life balance activities including, for example, outdoor trips in harmony with nature aimed at promoting employee engagement. Third, green benefits are offered to employees in the workplace itself. Y has developed an eco-friendly workplace of space saving while also being comfortable, convenient and safe. Departmental offices and canteens are connected by well-defined alleys, while work safety instructions are clearly set out on notice boards at the gate and entrance door of each workshop as well as on visitor cards. The factory is surrounded by the greenness of many trees, creating a sense of connectedness with nature for both its staff and the local community.

4.1.1.2.3. Green employee involvement

At Y, the sense of work ethic is widespread to employees. In particular, “for big targets that have a wide impact on the whole company, it must be completeness”, said one interviewee. The company wants its employees to understand the responsibility they must take for their own projects and to be proactive at work by thinking about opportunities, alternatives and solutions to their own problems. First, involving employees requires a degree of empowerment. At Y, this takes the form of empowerment at the departmental level. Special company targets are communicated to departments based on their functions, and each department has the right to initiate its own work, set targets, take responsibility, and self-manage both the environmental task itself and the allocated funds. For example, the environmental engineering department is in charge of all environmental issues relating to the production division, and an environmental manager is responsible for setting annual environmental targets, including, for example, reducing the water and electricity consumption and CO₂ emissions. Likewise, the HR and PR & Marketing divisions are each responsible for other annual environmental-related projects and CSR activities. However, such empowerment does not limit the potential for cooperation with other departments. As noted above, for projects that have an impact on the company as a whole, other departments also cooperate with the department responsible for implementing EOP and achieving environmental targets. For example, in the case of energy-saving, the HR division also designs eco-reminders and incorporates green training for staff to enhance engagement. As another example, all departments participate in and self-initiate green ideas on Green Day at the factory to clean and green the ecosystem around the factory. The environmental engineering department also designs convenient individual light switches in every office to promote electricity saving and save time. Second, at the individual level, Y promotes the involvement of every employee in environmental performance. This probably stems from the company’s pro-environmental attitude, which posits that « Environmental sustainability is the duty of all employees » as confirmed by environmental manager, and that « there is a key principle at Y, « always listen to people sharing information », as HR staff noted. Various facilitating practices include involving employees in planning environmentally related

community activities, personalized employee feedback via the online HR portal and skip-level meetings, during which employees are able to report to senior management levels and have meeting with the manager of their manager if they feel their initial information sharing has not been taken into account.

4.1.1.2.4. Environmental related community activities

The mother company has a pro-social orientation that touches people's lives with company grants through its global subsidiaries. Accordingly, Y's socio-environmental consciousness is widespread on a global scale. As of 2015, company grants started in (yyyy) had funded a number of projects in over 20 Vietnamese provinces, where Y has sponsored solutions and ideas that contribute to the sustainable development of environmental values and cultural heritage in Vietnam. As regards Y, the company has also diversified its annual community activities in which Y staff not exclusively go to the site to give the local community their hands, but also share their pro-environmental attitudes and knowledge through their action. The charity programme and environmental related actions, which can be named pro-environmental, include building playgrounds for the children using recyclable materials, donating water purifiers and water filters to a fishing village where local residents do not have access to clean water, cleaning up a local school's grounds, planting trees, collecting waste on beaches and in areas close to Y locations, participating in Earth Hour, donating Y cars, and providing safe, eco-friendly driving training. In short, Y contributes both financial and human resources and knowledge to preserve and protect the environment directly impacting people's health and quality of life.

4.1.1.3. Communication about CEP

Regarding communication about CEP, the second objective of this preliminary study, Y communicate about CEP to its community, internal employees and new recruits, but has yet to apply this practice in its recruitment campaigns. Generally, Y does not communicate about its pro-environmental attitude and practices in an extreme show-off manner. Instead, the company currently signals about CEP in a modest and at times discreet manner. This

study identified various channels operating as a means of CEP signalling, comprising of (i) activities in the community, (ii) pro-environmental staff, (iii) the workplace and intranet, (iv) the fan page, (v) the company website and (vi) press releases. Accordingly, the signalling style can involve (i) unidirectional and bidirectional verbal behaviour, (ii) nonverbal behaviour and (iii) informative objects.

Verbal behaviours can be found in a range of CEP practices referred to above through which the pro-environmental message is conveyed in the form of written texts on policy, reports, warnings, notice boards, and banners or through speech and talk. Nonverbal behaviour is a distinguishing feature of the company in terms of pro-environmental communication, in the form of talk via action that is practically meaningful and activates peers' self-consciousness vis-à-vis environmental protection. In particular, CEP is communicated through objects in firm expression. Examples can be found in the company's history of spiritual logos relating to eco-information and expressed on staff uniforms. A key feature of Y is that the company always communicates its spirit through slogans, meaning messages of significance that Y wants its peers to notice. Its slogans are related to Y's current situation and the wider historical industrial or organisational context. Y's recent slogans all consist of just a few words but convey the company's motto. Likewise, the first principle of Y's marketing attitude is that information communication must convey Y's message of having a better impact on the environment, such that « content about (the company's pillars) is expressed in one way or another » and while « it can just be very small, it still carries the company's message », as noted by one PR & Marketing staff. For example, the icon conveying the green message can appear in a discretionary manner so that « people may not immediately see what is actually written ». Second, « it must be correct information », said another PR & Marketing staff. Y has a communication department responsible for government, public and customer relations. One of its duties is to verify all incoming and outgoing information to ensure it is accurate. From Y's point of view, as shared by the department in interview, even customer complaints and company feedback must be correct since the company values customers' actual experiences, which help the engineering team to identify defects, repair products and develop next-generation products.

Overall, Y maintains effective communication channels. Notwithstanding the environmental effects on stakeholders, its messages are mainly aimed at internal employees and customers. Contrary to the expectations of the preliminary study, the company has not yet targeted pro-environmental job seekers and has therefore not taken into account pro-environmental signalling about CEP to job seekers in its recruitment messages. This investigation gave me the opportunity to have open conversations with two key positions in the HR division who had been responsible for recruitment practices for years. One of the individuals had been with Y for 22 years while the other had joined 5 years ago. Both shared the opinion that pro-environmental candidate attraction during recruitment is a good practice, however current organisational structure and duties of the HR division are not conducive to implementing more pro-environmental approach to recruitment. There are several possible reasons for this. First, it is probably the case that « it is not something that is essential to Y at the moment, or it doesn't seem necessary to approach it in that way », as HR staff noted. Additionally, candidates' pro-environmental attitudes and knowledge have not been included into job descriptions and job planning yet and are therefore not included in interviews and selection tests. Second, since the company website is administered by a regional subsidiary, if Y wishes to post pro-environmental recruitment messages on its website, which is designed to promote products, « it will be a bit complicated », as senior HR manager remarked. Third, because employee retention at Y has been very satisfactory and the workforce has been relatively stable for years, with the average length of service being 15 years, recruitment campaigns do not occur frequently. Indeed, the last university recruitment campaign had been conducted in 2008 and it was restarted in 2018. Y has previously some interactions with Vietnamese students at various universities through a pro-social campaign taking place on university campuses, in which the company encourages civil behaviour in traffic participation and promotes safe driving and traffic knowledge. However, there has been no promotion of environmental sustainability issues or environmental knowledge sharing as yet.

4.1.1.4. Critical viewpoints of researcher

From contemporary literature of automotive industry and from current thesis's perspective, I have some critical viewpoints as followings:

Actually, the interviews with HR department revealed that recruitment at Y is very professional with well-planned stages which go from the request of the department needing personnel to corporate practices among the HR department, the immediate manager of the vacancy, and the recruiting department. In addition, the company publishes vacancy postings and conducts applicant profile screening online through LinkedIn and Vietnamworks.com. From the viewpoint of this thesis, Y did always have some opportunities to implement pro-environmental candidate attraction early by sending out messages of the organisation's pro-environmental attitudes and values to potential job seekers through current employees, the recruitment team, employer branding along with the recruitment campaign and online recruitment postings following their current attitude of communication. In fact, according to current HR recruitment staff, this one did deliver the company's core values and culture of integrity and transparency in his brief introduction about Y on candidate interviews and tried to demonstrate the company's values whenever possible in appropriate situation. The interviews also revealed that Y prioritizes internal recruitment over external recruitment, meaning that the company often searches for candidates through current employees first and recruits on the basis of their recommendations. These strategies provide good opportunities to attract pro-environmental candidates and talents aligning with employees' pro-environmental behaviours and attitudes. As such, it is simply due to the fact that the company has not minded about the pro-environmental potential and the beneficial outcomes of pro-environmental communication about CEP as yet. Rather, my question is that whether or not Y's current opinion about talent and prioritized recruitment via internal recommendation restrain them from taking into account pro-environmental signalling about CEP in recruitment message as well as CEP communication to future pro-environmental potential and stakeholders other than customers? With Y having experienced a certain degree of instability among its workforce since 2018, many Y staff, especially technicians, moved for

other job offers. One reason was the attendance on the car market of a big Vietnamese firm, who conducted a mass recruitment with attractive offers. As such, when Y has been in demand for new talents, it is worth taking a proactive approach to attracting, recruiting and retaining pro-environmental talents.

Second, Y does not shown any annual sustainability report and such report is neither available nor accessible to the public like its mother company does; for example, annual statistics on CO₂ used in production, carbon emission in manufacturing, financial investment in toxic waste treatment and environmental sustainability project, women presence in leadership role, diversity, equity, minority and inclusion policy, etc. It therefore lacks the validity of environmental management at implementation level as well as the credibility of the internalization of organisational environmental orientation into production and human resources management. Meanwhile, existing literature is mature with sustainability report (Diouf and Boiral, 2017) which enables the credibility and validity of a company's environmental management and performance. Furthermore, contemporary literature's vision is toward the enhancement of its reliability and transparency via quality improvement of sustainability report (Boiral et al., 2019), audit committee additional to boards of directors and sustainability committees (Al-Shaer and Zaman, 2018), environmental audit by an independent professional agency (Prajogo et al., 2016). Likewise, using pro-environmental agent for auditing instead of policing and accuracy increase by employing precise language in writing report are value added to the assurance of environmental criteria and result interpretation. Relatedly, my question is whether or not the country's or regional organisational politic is the reason for Y's hesitation to transparency and accessibility. In this regards, Y can improve and apply its diversification strategy into pro-environmental signalling about CEP which can be verbal, nonverbal, paraverbal, written or unwritten in type of communication.

Next, waste classification is strictly regulated and managed at factory (assembling, painting and body shops), but not yet in office. The reason for this is that Vietnam has not yet mandated waste classification in waste treatment nationwide (e.vnexpress.net), and this fact prevents its citizens from implementing the practice, and even when citizens want to do

so in their residential areas, the waste collection system does not support their practice (e.vnexpress.net). This matters how Y company can influence the process by their eco-friendly citizenship via governmental relation with local authority, at strategic level, and via putting into practices officially waste classification in office, at operational level, while dealing with their waste collection partner about door-to-door listing and sorting.

Finally, in the context of post-industrialization and urban planning, an emerging research problem is how eco-planning, eco-innovation and eco-design serve to reconcile the existing environmental problems in high-density industrialized areas as well as in new urbanization areas. Therefore, for automotive industry in general and for Y in particular, one question relates to the degree to which a company can contribute to the ecosystem via its environmental service in terms of walkability, mobility, and eco-friendly public transport to protect health and assure accessible evacuation, as also examined in a recent publication by Herrmann-Lunecke et al. (2020). In a systematic review by Gohoungodji et al. (2020), the researchers have identified a variety of barriers explaining automotive industry's resistance to eco-innovation as well as the links between them. Therefore, Y can rely on these findings to examine their biggest barriers together with benchmarking their existing GHRM in order to adapt the most appropriate sustainability strategy and to enhance internal organisational eco-capabilities.

To conclude, the aim of this preliminary study was to explore the extent to which the company in the case study has actually implemented CEP or shown an environmental orientation prior to signalling them, as complying with the underlying quality of the « Handicap » principle. The results provide answers to all the research questions. The findings show that CEP practices at Y are very diversified and consistent with its environmental strategies and operations, as well as being aligned with the mother company's socio-environmental orientation. Employee involvement in environmental performance is taken into account and the company supports employee participation in CEP in various manners. Although pro-environmental communication and attraction for recruitment purposes have not been implemented, Y's focus on communicating and signalling about CEP among some groups of stakeholders has already had a certain effect in terms of creating and developing a

positive green image in its community where there would be potential pro-environmental job seekers. Therefore, these findings support the investigation on the focus group participants' real perceptions of Y's environmental related signals and behaviours. The critical viewpoints raised in this study 1 is worthy of further research from automotive literature and call for the company's collaboration in the remaining environmental issues in Vietnam.

4.1.2. Focus group

All three hypotheses were confirmed. The data reveals the overarching effect of perceived ecological value fit as a necessary condition. This factor interacts with perceived organisational prestige and/or perceived favourable employee treatment in the transition from perceived CEP signals to perceived OAE. However, the attracting mechanism is fully effectuated only when CEP signals are reinforced. In other words, they are sufficiently increased or clearer in participants' selective attention. Accordingly, the attractiveness effect is statistically strengthened when CEP signals are perceived as more honest and consistent after three times of signal reinforcement. Additionally, collective sense-making of individual change and transition tendency comes to the conclusion that information of logic verified by participants positively moderates their perception of OAE. Contrary to my hypothesis, although anticipated pride is presented in some participants, its mediating effect on the predicted relationship under study was not confirmed.

4.1.2.1. Research question 1 and 2: How do pro-environmental job seekers perceive the enterprise's signals about CEP? And whether or not they think that the enterprise is an attractive company/employer for environment?

Question 2 is approached using two techniques. First, participants' perceived OAE is evidenced in Statement 7 (*Overall, the company is environmentally attractive*). Second, upon completion of the individual questionnaire, participants were invited to talk about the reasons why they believe (or do not believe) that the company is environmentally attractive. In so doing, they provided more evidence relating to their ratings in self-justification. 5/7 participants are in agreeableness tendency right from the first session. Next, participants'

ratings in both groups all positively and significantly increased in session three, even in the case of 2 participants (one person per group) who slightly disagreed in the first session, with a slight decrease in the rating of one participant in session 2. Finally, after three sessions, 1 participant slightly agreed, 4 agreed and 2 strongly agreed with Statement 7. When asked by the researcher-moderator, the participant who responded ‘slightly agree’ with this statement agreed that she would attend an interview at the company if a suitable vacancy became available and she was invited to apply. As such, research question 2 is confirmed. The reasoning behind these ratings is illustrated in coding book in next subsections.

Regarding question 1, the finding is identified through qualitative coding on the extent to which participants perceive signals about CEP and how they come to find those signals as being environmentally attractive (see Table 8 below). The results show that signals about CEP from the company transition into participants’ perceived OAE via Perceived value-fit with the organisation (6/7 votes), Perceived favourable employee treatment (5/7 votes) and/or Perceived organisational prestige (4/7 votes). In other words, these three mechanisms are in a complementary relationship in predicting perceived OAE. Although Anticipated Pride was found in 4 participants (*Statement 4 - I would feel proud to be an employee of this company*) and 2 participants expressed the spillover effect from the company’s present and former staff who reported being very satisfied with their job, this signal-based mechanism is not the mediator.

Table 8: Coding book on perceptions about CEP signals and OAE in both positivity and negativity tendencies

Category	Tendency	Dimension/Description	Sub-dimension	No. of votes	No. of ref.
Attractiveness	Positivity	Perceived value fit with the organisation	Perceived pro-social orientation	4	6
			Agreeableness to the company’s ecological values - <i>Perceived pro-environmental technology</i>	4	
		Perceived organisational prestige	The combined effect of: - <i>Pre-existing positive perceptions</i> - <i>Perceived positive impact on the community</i>	4	4
		Perceived favourable employee treatment	Perceived employee satisfaction and good working environment	5	5
	Negativity	Prejudice about profit priority (group 1)		1	1

		Perception of compensation purpose (Group 2)		1	1
		Unsure about favourable employee treatment (Group 2)		3	3
Anticipated pride	Positivity	Perceived employee satisfaction	Perceived employees' pride	1	2
			Perceived good working atmosphere	1	
	Negativity	Obscure information about current employees (Group 1)		4	4
		Unsure about person-organisation fit (Group 2)		1	1

(Note: The number of votes is equal to the number of individual agreements with team members' opinions, while the number of references is equal to the number of individual justifications)

To further examine the interaction of the three mediators in their transition towards OAE, the presence of each participant in the three extents of signal-based mechanisms was coded and counted (see Table 9 below).

Table 9: Presence of participants in three mediating extents

Participant	(1)			(2)	(3)		(4)	(5)	(6)
	Perceived value fit			Perceived organisational prestige	Perceived favourable employee treatment		Presence in the number of Extents	Intensity of Presence in Extents in Times	Rating in Q 7
	Self-Expressed (Discussion)	Agreed (Q 5)	Agreed (Q 10)	Self-Expressed (Discussion)	Self-Expressed (Discussion)	Agreed (Q 6)			
A		•	•			•	2	3	6
B	•	•	•	•	•	•	3	6	7
C		•	•		•	•	2	4	7
D	•	•	•	•	•	•	3	5	6
E	•	•		•			2	3	5
F	•	•	•		•	•	2	5	6
G		•	•	•	•	•	3	5	6

Note:

- Q5, Q6, and Q10 refer to statements 5,6, and10 in the individual questionnaire. The agreeableness tendency only counts the 6-agree and 7-strongly agree choices after 3 times of signalling reinforcement.

- Q7 refers to the company's environmentally attractive level after 3 times of signalling reinforcement

Column (6) introduces participants' Likert score for perceived OAE at the end of the focus group after 3 times of signalling reinforcement. Perceived OAE is reinforced and shaped (6-7 of agreeableness) by 3 mechanisms (found in B, D, and G) and 2 mechanisms (found in A, C, and F). The combinations include:

- Perceived value-fit and Perceived organisational prestige
- Perceived value-fit and Perceived favourable employee treatment

- Perceived value-fit, Perceived organisational prestige, and Perceived favourable employee treatment

This result shows that Perceived value fit is the necessary condition for perceived OAE since it appears in all cases (Berg-Schlosser et al., 2008; Ragin, 2000). The sufficient condition (Ragin, 2000) is Perceived organisational prestige or Perceived favourable employee treatment. The company's organisational prestige was perceived by the participants since their environmental related actions have a positive impact on the community and on the participants, creating a positive spillover effect in society. However, in order for it to have a greater effect on their perceptions of the company's attractiveness for environment, the results show that it must fit with what they value in life (referring to the company's true care) or to have participants' agreement when and only when they find it fits with their viewpoint regarding the company's core values of environmental sustainability. For example, discussing how the company promotes its eco-products and technology, one participant argued « I think it must come from the company's core values ». Another participant remarked: « When I see their technology being magnificently improved, and the equipment or the material being relied on to produce such a car, I find they're making the best possible effort. »

Likewise, the company's signals about it were found to have made the participants perceive a comfortable green working environment or to reveal the company's good labour policies regarding pro-environmental issues, leading them to feel an assured pro-environmental condition in line with their ecological needs at work. This was how they perceived favourable employee treatment and, consequently, drew inferences about the company's attractive working environment. What matters here is their sense of congruence between their ecological attitudes about workplace and that of the company, with, for example, one participant explaining at the end of the focus group: « I wonder... why they don't impress people outside the company, the outsiders, while their working environment is attractive like that, to enable workers to somehow pay attention to the company, then having good impression. »

This result for perceived value fit is consistent with the findings in Chapter 1 on the importance of the compatibility of ecological values and job seekers' socio-environmental needs for securing employment, employee job satisfaction and employee retention after organisational entry. Accordingly, the findings for the three extents provides more evidence of the three mediating mechanisms by confirming their combined effect on the reinforcement of OAE and, further, the inferences about attractive pro-environmental employers.

4.1.2.2. Research question 3: How do their perceptions towards CEP signals increase/modify if more pro-environmental signals are produced/perceived?

4.1.2.2.1. Number of CEP signals identified/received by participants

To answer question 3, I began by looking for CEP signals and then counting the number of signals identified/received by participants (before the start of the next research activity). The results are shown in Table 10 below. The identified signals are those found in every participant's parole of self-explanation, while the received signals are found in my information-sharing paroles, in the paroles of HR staff and in the information-sharing of participating members adding new or supplementary information to the discussion. CEP signals come from a range of sources, including the company website, Google search results, participants' pre-existing knowledge about the company, other participants' information sharing, the researcher-moderator, and HR staff. Therefore, the sources used for individual information retrieval can be classified into three categories comprising participants' retrospection, web pages, and focus group members.

Table 10: Number of CEP signals identified/received by participants in 3 sessions

Session	Total number of CEP signals per session	Identified	Received
Group 1			
1	5	4	1
2	10	7	3
3	17	6	11
Group 2			
1	10	9	1

2	10	7	3
3	20	5	15

Table 10 shows that CEP signals either increased in numbers or were reinforced/retrieved after each research activity. One point worth noting is that within just 5 minutes of initial independent reading, the number of CEP signals heeded by participants was relatively high. This can be seen among those referred to « identified », regardless of whether the environmental related information available on the company's website was recognizable or not (Statement 2) and regardless of whether they read the community activities first before loading other pages (Group 1) or vice versa (Group 2).

4.1.2.2.2. Movements in participants' perceptions when more CEP signals are produced/perceived

To answer question 3, I examine the trends for the Likert scores for statements 3 to 10 resulting from the cumulative effect of signalling and information assimilation in 3 sessions (see Table 11 below). To better understand their tendencies, individual perceptions of CEP signals and individual opinions in each session were observed and examined, from which their meaning was inferred and their availability was calculated (see Table 12 below).

Table 11: Individual perceptions towards CEP signals in 3 sessions

Pa rt	Session 1									Session 2									Session 3								
	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an
A	6	6	6	5	5	5	5	5	5.38	6	6	6	6	6	5	5	5	5.63	6	6	6	6	6	6	6	6	6
B	6	5	6	6	6	4	6	6	5.63	5	6	6	6	6	5	6	6	5.75	6	7	6	6	7	6	6	6	6.25
C	2	4	6	4	3	6	6	3	4.25	4	5	6	4	5	6	6	6	5.25	6	5	6	6	7	7	6	6	6.13
D	6	7	6	6	5	5	6	6	5.88	6	6	6	6	6	7	6	6	6.13	6	6	6	6	6	6	6	6	6
E	6	5	5	4	5	4	6	5	5	4	4	6	4	5	5	5	4	4.63	4	4	6	4	5	5	5	4	4.63
F	5	6	6	4	6	7	6	6	5.75	6	5	5	4	5	6	6	6	5.38	6	6	7	6	6	6	6	6	6.13
G	5	3	5	4	3	4	6	5	4.38	6	4	6	4	4	5	6	5	5	6	4	6	6	6	6	6	6	5.75

Note:

Q3-Q10 correspond to statements 3 to 10 in the individual questionnaire on individual perceptions towards CEP signals

Table 12: Availability of individual perceptions and opinions per session

Part	Trend	Availability of individual's perceptions and opinions per session		
		Session 1	Session 2	Session 3
A	Positivity	+	+	+
	Negativity	--	--	--
B	Positivity	+	+	+
	Negativity		--	
C	Positivity	+	+	+
	Negativity	--	--	
D	Positivity	+	+	+
	Negativity	--	--	--
E	Positivity	+	+	+
	Negativity	--	--	--
F	Positivity	+	+	+
	Negativity		--	
G	Positivity	+	+	+
	Negativity		--	--

Table 11 shows the mean Likert score for Q3-Q10 in each session. Three tendencies were found for the individual mean: Gradual increase towards positivity (A, B, C, G), fluctuation towards positivity (D, F), and decrease towards undecidedness (E). Additionally, the gradual increase towards agreeableness (around 6-Agree) even correct at those who initially have very low Likert scores for some reason (2-Disagree or 3-Slightly disagree). Table 12 shows the simultaneous interaction of positive and negative signals being absorbed in their mind, defined by Drover et al. (2018) as balanced incongruence or imbalanced incongruence as regards the number of signals. However, this valence configuration (Drover et al., 2018) does not sufficiently explain the difference in mean values since they do not follow the same trend and do not rely on heuristic processing but on systematic processing as all participants considered the data.

Furthermore, there are some cases where more pro-environmental signals produced/perceived do not significantly reduce negative-tendency perceptions (E), OR the case (participant) where the increasing mean value was greatest in previous sessions decreased in the final session due to one level change in the high level of agreeableness (D), OR the case where the decreased mean value in the second session was inversely significant and up to a higher level (F). These differences indicate that there must be some essential

impact factor that determines the individual's movement in perceived attractiveness and agreeableness, meaning the significance of one CEP signal. Therefore, to be able to conclude on the necessary conditions, I went further by examining each individual movement associating with their reasoning during discussions and the evolution of their perception. In so doing, I identified the essential impact factor among the various factors explained (CEP signals) based on a range of evidence, including the recurrence and repetitiveness of factors (Ryan and Bernard, 2003), individual emphasis on factors, information tracking, expression of extremes/absolutes, confirmation and reconfirmation, personal consideration and self-explanation. Justificatory details are shown in Table 13 below.

Table 13: Key impact factors for individual perception and transition

Part.	Key impact factor	Identifiable signs for the impact factor	Keywords/clues
A	+ Perceived lower priority in Sales & Marketing at Y + Perceived professionalism and creativity of Y	+ Her question to HR staff about their current departments and sales recruitment + Her impression of their website and agreeableness increased gradually in every session	+ No "Marketing" mentioned, sales agents are independent from Y + "I thought it was merely" + "I also have a good impression" + "more reliable"
	- Personal prejudice about marketing tricks	- Personal considerations expressed in every session regarding the use of marketing in information disclosure	- "I still have a prejudice" - "just created by marketers" - "I still insist" - "we never know"
B	+ Pre-existing positive perception and favourable attitude towards Y + Perceived true core values of the company and company's significant efforts in terms of technology improvement	+ Her personal information sharing with detailed information about Y's true care for the Vietnamese community + Her perception of Y's consistent actions as stable and trustworthy	+ "It is true" + "less talk, more action"
	- Lack of information about current employees and working environment to make inferences (mostly in previous sessions)	- Several instances of confirmation in response to the researcher's verification question	- "Yes, that's right"
C	+ Regular and frequent activities perceived as true + Low employee turnover rate + Perceived professionalism of Y	+ Expression of absolutes and repetitiveness (e.g. I believe... I believe that...) + Natural expression of compliments with personal justification	+ "I believe" + "Good! More lively" + "It is true"
	- Perceived poor manner of information delivery on the internet - Need more information sharing by current employees to make inferences	- Her need for a more lively online presentation in previous session - Several instances of confirmation in response to researcher's verification question and personal opinion expressed repeatedly in sessions 1 and 2	- "Who knows" - "am a bit concerned" - "Yes, that's right"
D	+ Pre-existing positive perception about Y through ex-staff + Perceived true effort and enhancement of eco-capabilities by the company + Environmentally oriented actions and strategy perceived as true and not as a PR trick	+ She speaks passionately in every session about how Y's ex-staff talk about their job satisfaction and good working environment + Personal justification and defence	+ "firmly recommended" + "deeply absorbed" + "human company"
	- Prejudice about common manipulation by HR trainers	- Natural response e.g. "He is an HR trainer") and sharing of personal perspectives	- "trainer"

E	+ Perceived sustainability of products + Company's perceived company's positive impact on the community in terms of socio-environmental values	+ Personal concerns about organisational awareness and CSR are expressed in sessions 1 and 2	+ "awareness" + "quite a good signal"
	- Need figures and report, especially in the area of production regarding environmental impacts - Perceived difficulty in tracking information online for verification purposes - Need comparisons with other companies	- Need for information verification through reports/figures and comparison is firmly expressed in every session - Information tracking behavior on the internet (other than Y website) - Not impressed by HR staff presentation	- "report" - "to compare" - "I would prefer figures" - "I need some data" - "I need figures"
F	+ Perceived organisational carefulness in steps + Perceived true prioritized environmental issues + Perceived attractive working environment for employee via Y staff	+ Personal view of business ethics + Confirmation through expression of affirmative and defensive language (i.e., "No. I trust.")	+ "spillover effect" + "I trust"
	- Influenced by information received from peers and minds about the reasons for the company's limited information disclosure on the website and about the current workplace	- Natural exclamation (i.e., "How a good campaign like this isn't mentioned on the website!") and self-explanation in the end of her changing score	- "Who knows" - "am a bit concerned" - "I wonder"
G	+ Pre-existing positive perception of Y + Perceived true CSR and commitment to climate change	+ Firm self-expression once (i.e., me, personally) but without explanation or more information sharing + Her personal concern about CSR is expressed in both sessions 2 and 3 through her perception of the company's positive actions in the community and commitment to climate change	- "makes me trust"
	- Unsure about person-organisation fit and person-job fit and have less interest in the automotive industry - Need information from 2 or 3 more Y employees to make clearer inferences about the working environment	- Re-statement of absolutes (i.e., Absolutely sure) - Personal view of reliable information should be verified through employees and not managers (idea supported by other group participants)	- "I just need" - "I'm just concerned about"

Table 13 reveals the similarities in participants' need for information tracing and verification and the key individual impact factor justifying the results shown in Table 12. First, information verification is one similarity as it is found in all participants. However, more supporting cues in subsequent sessions did not satisfactorily reach the level of judgemental confidence in participant E compared to other members. For example, consider the following quote: « I am nearly... not completely interested in the whole of his speech (R: umm?). This is just my own perception, because I think... I would prefer figures, I mean information about welfare or something like that, I need some data to understand it better ». This phenomenon can be explained by signal detection theory, which posits that discrimination of stimuli is due to two separate factors (Lloyd and Appel, 1976; Stanislaw and Todorov, 1999): the receiver's sensitivity to the signal and the receiver's response bias. The former is described by absorptive capacity, while the latter is the personal tendency to say yes or no. Additionally, it can be explained by personal desirability bias, which is assumed to be a general tendency in the assessment process to give approval or the degree of

overlap between the signal and negative stimuli. In the case of participant E, the impact factor for the participant's persistence in the 5-Slightly agree score for the company's environmental attractiveness and low mean Likert score probably the essential need for figures and bases for comparison, which was firmly expressed and repeated in every session. Therefore, if more convincing data in the environmental sustainability report were provided, the participant would probably be more agreeable. Overall, this implies that the consistency (logic) of verified information found in various pro-environmental signals which clear participants' doubts is a necessary condition (Berg-Schlosser et al., 2008). While the successful verification of information is dependent on its honesty, it can be confirmed that the combined effect of perceived signal honesty and perceived signal consistency during information verification is necessary to form job seekers' perceived OAE. Second, the reason found for the slight reduction from "Strongly agree" to "Agree" in perceived signal honesty in D is derived from this one's prejudice about the common manipulations of HR trainers. The impact factor is HR personnel's current status as HR trainers. This finding is consistent with the literature in respect of the effect of a small signal. Third, the magnificent inverse effect found in F is explained by the concern for unobservable facts and the reason why the company limited information dissemination during previous sessions. In Session 3, information sharing by HR staff dramatically cleared her doubts and made her trust the attractive working environment. This finding also provides evidence of the necessary condition. Overall, the results for research question 3 on the transition of participants' perceptions about CEP are as follows:

- When more pro-environmental signals are produced/perceived with the verified necessary condition that those signals are perceived as honest (true) and consistent (logical): Gradual increase towards agreeableness (A, B, C, G) or fluctuation towards agreeableness (D, F).
- When more pro-environmental signals are produced/perceived without the verified necessary condition: Decrease to "undecided" (E).

One important finding is that the right reinforcement of pro-environmental signals occurs when various consistent pro-environmental signals characterized by honesty help

strengthen the pre-assumed pro-environmental message (inference) or together reveal a pro-environmental message (inference) that a single pro-environmental signal cannot do by itself. With respect to the necessary condition, the following conclusion is drawn:

The degree to which participants gradually increase their agreeableness with the company's pro-environmental behaviours and practices and make inferences about the company as a pro-environmentally attractive employer is dependent on their perception of ecological value fit with the company and the reinforcement of consistent pro-environmental signals of honesty which clear their doubts during information verification.

4.1.2.3. Research question 4: How do positive perceptions towards CEP signals increase if those signals are perceived as more honest?

Table 11: Individual perceptions towards CEP signals in 3 sessions

Pa rt	Session 1									Session 2									Session 3								
	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an
A	6	6	6	5	5	5	5	5	5.3 8	6	6	6	6	6	5	5	5	5.6 3	6	6	6	6	6	6	6	6	6
B	6	5	6	6	6	4	6	6	5.6 3	5	6	6	6	6	5	6	6	5.7 5	6	7	6	6	7	6	6	6	6.2 5
C	2	4	6	4	3	6	6	3	4.2 5	4	5	6	4	5	6	6	6	5.2 5	6	5	6	6	7	7	6	6	6.1 3
D	6	7	6	6	5	5	6	6	5.8 8	6	6	6	6	6	7	6	6	6.1 3	6	6	6	6	6	6	6	6	6
E	6	5	5	4	5	4	6	5	5	4	4	6	4	5	5	5	4	4.6 3	4	4	6	4	5	5	5	4	4.6 3
F	5	6	6	4	6	7	6	6	5.7 5	6	5	5	4	5	6	6	6	5.3 8	6	6	7	6	6	6	6	6	6.1 3
G	5	3	5	4	3	4	6	5	4.3 8	6	4	6	4	4	5	6	5	5	6	4	6	6	6	6	6	6	5.7 5

Note: Q3-Q10 correspond to statements 3 to 10 in the individual questionnaire relating to individual perceptions of CEP signals

Signal honesty is conceptualized as costly signals or hard-to-fake signals that determine the trustworthiness and reliability of information. The results of the coding work (see Table 14 below) confirmed both dimensions of this signal-based mechanism, i.e. costly and hard-to-fake, and explored new dimensions. All 7 participants perceived the cost, the trustworthiness and reliability of CEP signals. The reasoning for the reluctance of participants in previous sessions can be found in the negative tendency.

Table 14: Coding book on perceptions about signal honesty in both positivity and negativity tendencies

Category	Tendency	Dimension/Description	Sub-dimension	No. of votes	No. of ref.
Honesty	Positivity	Perceived trustworthiness and reliability	Perceived true action	3	7
			Perceived public appreciation	1	
			Perceived hard-to-fake signal: - No hidden defect - Natural expression of no show-off and quick response - Verified information based on reliable sources (More consistent sources and perceived normality; Trusted information through meeting real employee)	2 4 6	
		Perceived costly signal	Pro-environmental behaviour of HR staff associated with extra-work role	1	7
			Resource spending on various environmental-related community activities	1	
			Perceived true effort by the company (in quality improvement)	5	
		Perceived organisation's carefulness in their steps		1	1
	Negativity	Perceived subjective marketing (Group 1)		1	1
		Doubts and Perceived difficulty in information verification online (Groups 1 & 2)		5	5
		Lack of comparable information source (Group 2)		1	1

(Note: The number of votes is equal to the number of individual agreements with team members' opinions, while the number of references is equal to the number of individual justifications)

To observe the tendency in question 4, a calculation was performed to establish whether the mean value of positive perceptions (Likert score of 4, 5, 6 or 7) increases if Q8 increases in value. This trend was found in the case of 4 participants (A, B, C, and G) from Session 2 to Session 3 (see Table 11 above). Since both their ratings for Q8 and their mean value increase gradually at every signal reinforcement, it can be noted that when more pro-environmental signals are perceived to a greater extent as honest, their mean values increase gradually in a positive direction and finally are far from themselves in Session 1 a level of 1.38 on average even for those cases where there were some negative perceptions of a signal in the beginning.

4.1.2.4. Research question 5: How do job seekers' perceptions of organisational attractiveness for environment increase if those signals are perceived as more consistent?

Table 11: Individual perceptions towards CEP signals in 3 sessions

Pa rt	Session 1									Session 2									Session 3								
	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Me an
A	6	6	6	5	5	5	5	5	5.3 8	6	6	6	6	6	5	5	5	5.6 3	6	6	6	6	6	6	6	6	6
B	6	5	6	6	6	4	6	6	5.6 3	5	6	6	6	6	5	6	6	5.7 5	6	7	6	6	6	7	6	6	6.2 5
C	2	4	6	4	3	6	6	3	4.2 5	4	5	6	4	5	6	6	6	5.2 5	6	5	6	6	7	7	6	6	6.1 3
D	6	7	6	6	5	5	6	6	5.8 8	6	6	6	6	6	7	6	6	6.1 3	6	6	6	6	6	6	6	6	6
E	6	5	5	4	5	4	6	5	5	4	4	6	4	5	5	5	4	4.6 3	4	4	6	4	5	5	5	4	4.6 3
F	5	6	6	4	6	7	6	6	5.7 5	6	5	5	4	5	6	6	6	5.3 8	6	6	7	6	6	6	6	6	6.1 3
G	5	3	5	4	3	4	6	5	4.3 8	6	4	6	4	4	5	6	5	5	6	4	6	6	6	6	6	6	5.7 5

Note: Q3-Q10 correspond to statements 3 to 10 in the individual questionnaire relating to individual perceptions of CEP signals

Signal consistency refers to various pro-environmental signals conveying the same message or pro-environmental information are logical and consistent. This signal-based mechanism was relatively stable and similar among the participants throughout the sessions without any appearance of negative tendencies (Table 15).

Table 15: Coding book on perceptions about signal consistency

Category	Dimension/Description	No. of votes	No. of ref.
Consistency	Perceived consistent image of the company	1	1
	Information consistency over time and various sources convey the same message	5	5
	Perceived actual pro-environmental results	1	1
	Perceived unique message about technology	2	2

(Note: The number of votes is equal to the number of individual agreements with team members' opinions, while the number of references is equal to the number of individual justifications)

5 participants (B, C, D, F, G) persisted throughout with 6-Agree for perceived signal consistency (Statement 9 - These pro-environmental messages are consistent with each other), 1 participant (A) moved from 5-Slightly agree to 6-Agree, and 1 participant (E) changed from 6 to 5. Therefore, I observe the increase in participants' Likert scores for Statement 7 (Overall, the company is environmentally attractive) for cases of persistence in

perceived signal consistency. Table 11 above shows 4 cases (B, C, D, G) where the Likert score for Statement 7 gradually increased in every participant. The results show that for cases where all pro-environmental signals are always constantly consistent, participants' Likert scores for the company's environmental attractiveness gradually increased, eventually becoming far from themselves in Session 2 a level of 1.25 on average and far from themselves in Session 1 a level of 2.25 on average, even in cases where they slightly disagreed at the beginning.

4.2. Discussion and managerial implications

4.2.1. Strong effect of small consistent signals

There is always reasoning for a move associated with a sign occurring intentionally or unintentionally even though it is a slight change. This view can be supported by the basic rule of the Locard Exchange Principle for forensic science, according to which « every contact leaves a trace ». The focus group has a unique context, relying on the carmaker's real current causal business context and pro-environmental communication associated with the carmaker's history, current situation and future direction, which could not be changed at that point in time. This is explained by the theory of organisational memory (Hunt and McDaniel, 1993; Hunt and Smith, 1996). The organisational processing embedded in organisational memory together with the organisational cues produced for the focus group resulted in the greatest consensus for the reinstatement of organisational distinctiveness, helping participants to encode pro-environmental signals and come to have inferences about OAE as predicted. Likewise, the causal condition of a participant's perception was found to be contingent upon their retrospection in each session and on internal and external information integration, interpretation and absorption of what was actually happening. A participant's perception is affected by the company's past and present pro-environmental behaviours as reflected and exhibited on the website and through focus group members. Therefore, it is naturally uncontrollable. In this respect, I extracted from table 13 (above) the case (participant) in Table 13 above with the greatest signalling effectiveness to examine whether

there is a degree of similarity applicable to most cases. This occurs in B and C (Table 16 below). Based on the above logic for a move, where there is the strongest effect (7-Strongly agree), there must be a participant's special attention to some pro-environmental signal that addresses their essential need/concern.

Table 16: A focus on the essential impact factor relating to cases with the strongest signalling effectiveness

Case	Q1	Q2	Strongest effect different from all others	Trend over 3 sessions			Justification factor	Keywords (sign)
				(1)	(2)	(3)		
B	6	3	Anticipated pride (Q4)	5	6	7	+ Pre-attitude favourable to Y + Company's core values perceived as consistent and true	"It is true" "less talk, more action"
C	4	1	Perceived signal honesty (Q8)	6	6	7	+ Perceived true regular and frequent activities + Low employee turnover rate + Perceived professionalism of Y	"I believe, I believe" "Good! More lively" "It is true"

In both cases, the determinant factor is the verified information in the interaction with HR staff in Session 3, which clarifies the information that participants have been looking above all else. Despite the fact that the company's environmental-related information on the website is not recognizable (Q2), and whether or not there is availability of past event of affection in their mind (Q1), it is trust and perceived true action that drive participants' inferences and major tendencies. Table 16 presents the keywords and factors indicating how participants come to place trust in the carmaker and how their trust is reinforced. Similarly, the increasing level of trustworthiness is also reflected in other cases (A, F, G) through keywords such as « more reliable », « I trust », and « makes me trust » (Table 13), which stand for their positive tendencies. This effect supports the conclusion on causal conditions (verified information, consistency of honest pro-environmental signals) that together constitute the company's trustworthiness and reliability vis-à-vis environmental sustainability.

4.2.2. Managerial implications

4.2.2.1. Pro-environmental interactions

With the world is heading towards the era of wireless connection, people are increasingly going online, whether for work or private life. They tend to be oriented by whatever catches their eye on screen and retain their engagement, meaning selective attention and absorption (Saks and Gruman, 2011). This study also showed that participants in Group 2 were smartphone dependent, going online on a daily basis to communicate and get updates. As such, the tendency of an employer's pro-environmental signal display to attract a potential pro-environmental job seeker increases the likelihood that the job seeker will truly heed the signal and read the pro-environmental recruitment message. However, in the phenomenon of marketing everywhere, the degree to which job seekers perceive similarities among different signals from various companies or have a prejudice of greenwashing causes them to doubt the honesty of the signals and the signaller. As such, this study points to two strategic signalling methods: (i) the maintenance of pro-environmental interactions between the employer and potential recruits during the recruitment process, (ii) pro-environmental signalling by systematic processing and eco-design that addresses the target's essential ecological needs from an early stage and consistently throughout the process. Ideally, there are two ways to increase the propensity of pro-environmental job seekers to heed a signal: to diversify or to gradually reinforce the pro-environmental signal to a sufficient extent. Additionally, in order to help targeted pro-environmental talents make the right inferences about a pro-environmental message, environmental cues can be signalled in a cumulative manner indicating the combination of CEP signals to convey the message.

Furthermore, this case study showed that job seekers have a greater tendency to more believe the information and personal experiences shared by employees rather than by managers, as illustrated by Group 2. If online interactions following the « Handicap » principle enable questions and answers and conversation between current employees and job seekers/applicants, the result will be, on the one hand, to clear their doubts and, on the other, to make them trust the organisational ecological value and environmental orientation. In

practice, a recruitment process can create opportunities for pro-environmental interactions, such as career days and (online) interviews, if meetings facilitate the expression of pro-environmental attitudes and provide more CEP information, it is two way beneficial green selection.

4.2.2.2. The power of keywords

Pro-environmental communication following the basic rule of hard-to-fake is more effective and efficient in attracting pro-environmental talents when it uses the right keywords to activate environmental identity for both detecting and recruiting the right individuals who fit with organisational ecological value. In this respect, another nature of recruitment campaigns and interactions is that they take place within a short period of time, while recruiters and participants indeed have incomplete information about each other (Celani and Singh, 2011). From the recruiter's perspective, to ensure equality for all targeted job seekers, delivering a message and emphasizing pro-environmental keywords expressing key concepts enhances the likelihood that a compatible pro-environmental job seeker will heed the signal quickly and keep the message in mind. In particular, if the information is of the job choice's significant factors for which the job seeker is looking in the targeted vacancy or in the employer, it will significantly activate job pursuit behaviour. This method of signalling helps the employer to detect the right pro-environmental candidate best suited to the position in an « arms race » where there are more applicants than vacant posts and where applicants manipulate much to appeal fit the requirements of the position, because only true applicants have an insightful knowledge about the concept. Accordingly, identifying what the target is expecting and then communicating about the expected through more environmental knowledge sharing is beneficial to green candidate attraction since the practice increases the trustworthiness of both parties based on the fact that only true pro-environmental organisations and individuals can express more environmental knowledge in an insightful manner.

4.2.2.3. The ethics of the signaller and signalling

The last and most important implication concerns the moral and ethical values of pro-environmental signalling of « Handicap » principle for this practice to be applied in pro-environmental candidate attraction. Since environmentalism is a sub-set of business ethics (Chapter 2) and green candidate attraction should comply with the ethics of care, which posit that a caring manager (employer) should not impose a burden on the receiver (potential employee) (Paillé, 2018), the application requires the ethical standpoint from the signaller and the signalling itself. Additionally, the current framework concurs with the notion that a signaller in a GRS needs to have an objective to signal to attract targeted pro-environmental job seekers. Accordingly, the pro-environmental signalling for a GRS is not designed to attract everyone. In so doing, the signaller (employer) is capable of caring for the vacant post, which is the responsibility of a pro-environmental employer, because caring is a burden and not a blessing (Solomon, 1998). Importantly, it is not only a matter of morality, but also a matter of efficiency in managing an environmental oriented business context. In other words, if pro-environmental signalling is not ethically competent, there will be negative consequences after organisational entry, including employee dissatisfaction and early job quit, causing staff instability, generating more costs for the company as a result of ineffective planning, and temporary work burden on other staff. In addition, signalling that does not comply with the principle can have a negative impact even in the recruitment process, for example, the decrease in job seeker's perception of organisational trustworthiness or inverse effect because of perceived deception or untrustworthy underlying quality. Finally, rooted from sustainable HRM, a GRS needs to follow the business ethics of labour market in respect that one company's GRS does not negatively influence other employers in the same business market to maintain the corporate virtues.

4.3. Conclusion

The results of the empirical investigation are significantly positive, contributing valuable findings to signalling theory and providing new insights not yet identified in the existing literature.

First, by showing the core meaning of consistent honest signals during signal reinforcement, this study consolidates signalling theory by the management fundamental of efficiency. This approach to pro-environmental signalling ensures both signal efficiency and the maintenance of pro-environmental job seekers' motivation to continue. This finding is consistent with Bird and Smith (2005) in respect that honest signals need not be costly and need not impose a « Handicap » if the two communicators have sufficiently coincident interests. This finding encourages a shift in viewpoint of existing literature in applicant attraction in the context of corporate greening towards the measure of environmental impacts for the right conduct and the adjustment of signal frequency, signal heterogeneity for optimum effect. Relatedly, signalling effectiveness is dependent on signal reinforcement during the process of a GRS. Future studies can research on the affect of signal reproduction on participants' agreeableness tendency.

Second, the findings provide evidence that perceived trustworthiness is only effectuated when the employer's care for the natural environment and pro-environmental behaviours can be verified by participants as being true or logical. This finding contributes to the principle of underlying quality. In this case study, the company's internal environmental orientation exhibited in its core values and realistic CEP practices helped in participants' encoding, retrieval and inference-making during information tracing. This points to the worthwhileness of the spillover effect (Verfuert and Gregory-Smith, 2018) and the proactive manner in which an organisation weighs its environmental impact on its community, acting pro-environmentally before the occurrence of a foreseeable event.

Third, while there is an inconsistency in the results of previous studies for perceived value fit, the support for perceived value fit in this case study demonstrates the importance

of ecological value for organisational attractiveness for environment. Accordingly, the new insights gained from this research on perceived value fit as a necessary condition shed light on why and how the company is behaving for environment really matters to participants who have a sensitivity toward the environmental sustainability issues and influences their agreeableness to the company's CEP practices or pro-environmental behaviours. In particular, the complementary effect of perceived organisational prestige and perceived favourable employee treatment adds to the findings of Jones et al. (2014). This new perspective suggests new direction for future research on the extent to which internal environmental orientation and external environmental orientation differ or interact in their impact on job seekers' perceived OAE. With the conclusions on the effect of cumulative CEP signals now clear, the research questions remain open as to what organisational ecological value actually is and how this value is represented in the manner of implementing or signalling about CEP. Also, which pro-environmental signal is hard-to-fake? And how does the organisational environmental identity system play its role in this process?

Next, verified information of logic provides a more insightful view of the essential constituents of participants' judgemental confidence for decision-making (Drover et al., 2018). Further research is recommended to examine the impact of individual differences on the level of judgemental confidence, for example individual sensitivity to environmental sustainability issues, green absorptive capacity, environmental identity as well as the influence of personal bias and prejudice.

Finally, the empirical study has some limitations. Since the data were collected from focus group discussions among members of the same generation, it limits conclusion on the effect of CEP signals on OAE among Vietnamese job seekers of different educational backgrounds, of different genders or from different generations. Additionally, the data collection was carried out in 2 hours, it was not possible to observe whether the participants' perceptions remained unchanged after the meeting after they would have found out more about the company like they normally do or experience in a real GRS process. Furthermore, although all the study participants expressed a pro-environmental attitude or sensitivity to environmental sustainability issues, it is unsure as regards whether pro-environmental

signalling about CEP in the same way has the same effect on other samples who neither find themselves as pro-environmental nor concern about environmental issues. Accordingly, how can the activation of individual environmental identity be enabled in the process to generate individual recognition and OAE? Also, future research is encouraged to study on the relationship between participants' nonverbal and paraverbal expressions relating to CEP signals and the method of CEP communication, which can be considered latent variables, and their agreeableness to a company's CEP practices so as to contribute more to research on signal effectiveness.

In conclusion, compared to a quantitative study, this qualitative experiment provided an opportunity for an in-depth examination of participants' responses and reactions to research questions and the reasoning behind individual feelings and assumptions. Since previous studies on the three signal-based mechanisms were conducted in developed countries, the existence of a sample confirming existing findings in a developing country provides initial evidence for the homogeneity effect of pro-environmental signalling in an honest and consistent manner of sufficiency on environmental-minded job seekers for the purpose of recruiting, detecting, attracting and selecting pro-environmental talents.

Chapter 5

SYSTEMATIC REVIEW ON ENVIRONMENTAL INNOVATIVENESS: A KNOWLEDGE-BASED RESOURCE VIEW

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5.1. Résumé

La poursuite de l'éco-innovation est une stratégie à la mode pour les entreprises contemporaines cherchant à optimiser leurs retours sur investissement et à démontrer leur responsabilité socio-écologique en améliorant la qualité de vie par la réduction de leur impact néfaste sur l'environnement naturel. L'innovativité écologique (IE), ou la capacité d'éco-innovation, est donc importante. Cette étude passe en revue 40 articles dans le but de raffiner le concept d'IE au niveau entreprise et de synthétiser la littérature afin d'identifier les déterminants clés en adoptant une approche centrée sur le savoir. Les résultats révèlent des facteurs importants, y compris le rôle d'une orientation vers l'éco-innovation sur le long terme, la pratique d'une forme de gestion environnementale qui va au-delà de la simple certification environnementale, l'éco-capacité dynamique, la capacité d'absorption écologique, la capacité d'adaptation écologique, les activités de recherche et développement, l'intégration de connaissances externes, et la collaboration avec des partenaires appropriés au sein d'un réseau stratégique basé sur la norme de réciprocité. Nous proposons un modèle conceptuel intégré pour démontrer comment les facteurs interagissent dans la prédiction de l'IE. Les résultats révèlent un certain nombre de lacunes dans la littérature, et plusieurs questions seront articulées pour orienter les recherches futures dans ce domaine.

Mots clés : Innovativité écologique, éco-innovation, capacité d'absorption écologique, capacité d'adaptation écologique, capacité dynamique.

5.2. Abstract

Pursuing eco-innovation is a fashionable strategy for contemporary firms to both increase returns on investment and display their socio-ecological responsibility by increasing the quality of life through reducing the negative impact on the natural environment. Environmental innovativeness (EI), the eco-innovation capacity, is therefore important. This review is a study on 40 articles to refine EI at the firm level and synthesize the literature to find their determinants from a knowledge-based resource view. The results revealed important factors, for example, long-term-based eco-innovation orientation, environmental management beyond an EMS certificate, dynamic eco-capacity, green absorptive capacity, green adaptive capacity, research and development activities, external knowledge integration, and collaboration with appropriate partners in a strategic network based on the norm of reciprocity. An integrated conceptual model is proposed to demonstrate how the factors interact in the prediction for EI. The findings identified some literature gaps, and several research questions are therefore suggested for future research.

Keywords: Environmental innovativeness, eco-innovation, green absorptive capacity, green adaptive capacity, dynamic capacity

5.3. Introduction

The most challenging effort of today's business activities is reducing the environmental footprint while remaining on track toward sustainability. From a socio-ecological perspective, people and nature are in an interdependent relationship, whereby resources are exchanged to both prevent environmental degeneration and engage in ecological services for human well-being. Given that an organization is a small-scale representation of the society and its operation unfortunately and unavoidably has a negative impact on the environment, organizational innovation and creative solutions are needed to secure, restore and develop the capacity of its ecosystems (Olsson and Galaz, 2012). The pursuit of eco-innovation has therefore become a trend in the last two decades with the participation of organizations worldwide, including the United States (since 2002), Canada (since 2003), the UK, the European Union and other countries worldwide (Leflaive, 2008a; Leflaive, 2008b; Machiba, 2012). The arguments often arise around the question of whether it is feasible to increase productivity and efficiency while reducing environmental impact. The lessons learnt from pioneer companies in eco-innovation have proved that it is not only possible but profitable to pursue environmental goals. General Electric (GE) and its "Ecomagination" project is an example of this achievement.

According to the company's report, the project has generated \$270 billion in revenue for a total investment of \$20 billion since its launch in 2005 (Condon and Holdredge, 2017). At the same time, the company has succeeded in reducing greenhouse gas emissions by 42% since 2004. "Ecomagination" is aimed at improving business and environmental performance while generating revenues. Their clean technology, renewable energy and digital solutions being scaled globally potentially contribute by closing the global carbon gap by 30% (Frodl, 2017). Importantly, the project is meant to be GE's nonstop journey addressing collective activities that involve employees in eco-initiatives and implementation. This growth strategy of GE demonstrates that it is possible to be a socially responsible company by developing environmental innovativeness (EI) and the organizational capabilities for eco-innovation while simultaneously earning profits.

However, many firms have not succeeded in the implementation, and this is normally due to the lack of resources or collaborations (Hobcraft, 2013). Otherwise, they might not have the right strategy that complies with the trend of environmentalism to reap first-mover advantages, for example, a differentiation strategy, corporate environmental management or an improvement on intangible assets (Chang, 2011). Consequently, it is necessary to analyse EI at a holistic firm level and a path-dependent approach. Additionally, a body of literature has made a significant contribution to examining eco-innovation, its diffusion or determinants at a macro level (Bendell, 2017). Comprehensive and inclusive studies lack the impact of internal factors at the micro level, including resources, capabilities and competences (Diaz-Garcia et al., 2015). Hence, it is worth refining EI and exploring its enablers for the achievement of eco-innovation at the firm level.

While an organization inescapably exists in an interdependent environment with external actors, it needs both important critical resource exchanges and control over the exchange of such resources to manage and avoid the dependence (Pfeffer and Salancik, 1978). In this regard, the organization needs an internally based resource to both limit the influence attempts of the external and be able to rely on this resource for its own sake. This paper assumes that the knowledge-based resource is one essential capacity that an organization needs to deploy and develop over time and that EI should be regarded as a problem-solving process that involves not simply the deployment of resources but the creation of knowledge and capabilities while absorbing external existing knowledge (Nickerson and Zenger, 2004). From a resource-based view, people and their intellectual assets are considered a competitive advantage resource when it is rare, valuable, inimitable, and non-substitutable. Meanwhile, the knowledge-based view considers the firm's knowledge the « input-output combinations achievable with all possible mixes and levels of activities known to the firm » (Nickerson and Zenger, 2004, p.618). Additionally, firms differ not only in values, resources and competence but also in their vision; thus, strategy focuses on making a future that requires continuous improvement and innovation (Takeuchi, 2013). This process acknowledges three features: (1) putting humans at the centre of strategy, (2) treating strategy as a dynamic process and (3) having a social agenda (Takeuchi, 2013). From

the above approach, EI is closely linked to dynamic capability and social sustainability. However, this concept and the complex relationship seem to be underexplored. Moreover, traditional research on organizational innovativeness investigated innovation orientation or adoption decisions rather than implementation and therefore paid little attention to how the determinants interact (Wolfe, 1994). As such, the main objective of this paper is to map the terrain of EI as eco-innovation capabilities at the firm level and synthesize the literature from a knowledge-based resource view. A systematic review is therefore an appropriate method because of its nature of providing the most complete view on a bounded area. The research questions are:

- i. What are the conceptual and operational definitions of environmental innovativeness?
- ii. What are the antecedents of environmental innovativeness?
- iii. How are these factors linked to each other?

Research findings have theoretical contributions, academic contributions and practical implications. The theoretical contributions are threefold. First, the conceptual definition of EI enables an insightful understanding on what actually constitutes organizational capabilities for eco-innovation in the future, while the operational definition of EI gives instructions on how to measure this construct at a multi-layer firm level. Second, no study has ever synthesized the antecedents of EI as an organizational prerequisite for eco-innovation; this systematic review therefore fills this research gap. Third, the conceptual model illustrating the complex relationship of the factors in the prediction of EI contributes a map and directions to future research. Relatedly, the results would encourage researchers in the field to go further by studying “what has not been known” from “what has been known” and to test the generalizability of previous research findings in different contexts. From an academic perspective, this paper contributes to education and environmental training by offering the participants an overview of the importance of eco-innovation as well as the roadmap to achievement along with the organizational preparation for the necessary resources and capabilities. From a practical perspective, knowing the determinants and the facilitators of EI to be adopted in the decision-making process will keep the managers on the right track. Accordingly, the conceptual model enables the practitioners to foresee the

obstacles and avoid mistakes. Given that failures are unavoidable in some cases, knowing the right strategies will help harness the failures and lessons from the failures (Alexander, 2015).

5.4. Theoretical background

5.4.1. Eco-innovation: conceptualization and outcomes

Energy/material consumption and carbon emissions often account for major problematic issues that most companies struggle to manage efficiently at one time or another. Misusing resources will lead to the increase of operational costs, while failing to meet the emission regulations, will lead to fines or higher charges, both of which may cause financial loss that affects the overall performance. As such, many companies operating in cleantech have striven to introduce their eco-applications to the market. This should include 14 innovative clean-tech companies in Canada (Bitti, 2014), which offer both higher efficiency and significantly higher returns on investment. Eco-innovation is important to any enterprise regardless of their role as the end-user or the producer because the final effect is a wide application into organizational routines or consuming behaviour. Eco-innovation is conceptualized as the innovation — the modification, improvement or entirely new developments of product, technology, practice, system or process — that has a favourable impact on the natural environment while respecting the harmony between social, economic and environmental sustainability goals, the so-called triple-bottom line, regardless of what the main objective of the innovation is (Bendell, 2017; Carrillo-Hermosilla et al., 2009; Dahan and Yusof, 2016; Silvestre, 2015a).

There are reasons why eco-innovation has become an important attribute of sustainable development. First, due to the emerging severe environmental problems in recent years, environmental sustainability (ES) has received considerable attention by authorities, communities and companies (Bendell, 2017; Choi et al., 2013; Dossa and Kaeufer, 2014). Environmental issues have become a global concern that will be external pressure for every company when multiple stakeholders expect them to exhibit their social responsibility in

natural protection. Because the company's innovation and competition are not isolated from its supply chain, considering the stakeholders' concern for this network will reduce the risk of suffering from their reactions and enhance collaboration with these strategic actors (Silvestre, 2015a; Silvestre, 2015b). This will contribute to a more sustainable supply chain, in which cleaner production innovation is a key attribute (Silvestre, 2015a). Second, business owners do experience a sense of moral obligation to tackle environmental problems because they care for the health and the well-being of others (Bendell, 2017). Third, in a turbulent environment, their goal is to survive and enhance their competitive advantage (Choi et al., 2013; Schumacher and Wasieleski, 2013). As such, eco-innovation would be the best solution for environmentally responsible producers because eco-innovation is distinguished from an invention by commercialization (Boons and Lüdeke-Freund, 2013). For example, one empirical study by Chan et al. (2016) confirmed that the pressure of environmental regulations/policies enables green product innovation, where the outcomes may offset the cost of environmental management implementation while bringing not only cost efficiency but also profitability. Another empirical study by Küçükoğlu and Pınar (2015) found that eco-innovation is positively related to organizational environmental performance and organizational competitive advantage. For the end-users, eco-applications help reduce the energy/material consumption and optimize the cost matter. In brief, eco-innovation enables the continuous improvement of both economic and environmental performance, a combined effect that impacts social sustainability in the sense of improving the quality of life (Klewitz and Hansen, 2014).

5.4.2. Linking EI and prior theories of innovation

An organization is bound to the conditions of their environment and needs the interconnection of activities to survive (Pfeffer and Salancik, 1978). Considering that a company targets eco-innovation, EI is indeed a roadmap to eco-innovation with resource planning and integration. Furthermore, because the business environment is constantly changing (Riivari and Lämsä, 2014), EI can be regarded as state-of-the-art problem solving that represents the efforts of the organization to implement eco-initiatives and create

competitive advantages, which therefore requires the engagement of both top management and staff at all levels. EI itself needs thorough preparation. To have insight into EI, it is necessary to link this concept strategically and operationally with the five theories of innovation below, which are compatible with the context of corporate ecological performance.

5.4.2.1. Strategy-based portfolio management

Associated with research and development (R&D) activities, portfolio management is a critically important tool for each innovation project to research its feasibility and evaluate the return on risk-taking investment, especially at the early stage. For eco-innovation, a company cannot target at all ES goals but instead focuses on strategic ones that fit with their business operation and respond to market demand. Accordingly, contemporary portfolio management for innovation has shifted from selecting the best projects, characterized by rankings and competitiveness, to selecting a set of projects that best meets the organization's strategic goals to deliver future benefits (Menke, 2013; Smith and Sonnenblick, 2013). This practice now goes beyond project management as it turns from a budget-based approach to a more holistic approach illustrating the “stretch” that the organization must go through to success. The assessment should be for an entire portfolio rather than a single project based on a multi-year period towards long-term objectives (Smith and Sonnenblick, 2013). As such, the practice requires the capability to forecast the future of innovation evolution, allocate resources and manage the shared resources. Finally, effective portfolio management is characterized by strategic alignment and balance to ensure that simplistic financial projection will not dominate the project selection process as well as maintain the balance between socio-economic and environmental goals (Menke, 2013).

5.4.2.2. Building a culture of innovation

Organizational culture is repeatedly mentioned in the management literature for its strong effect in driving organizational behaviour and success. One cannot disregard the idea that a supportive culture will enable the implementation of strategy or else « culture eats

strategy for lunch », which is attributed to Peter Drucker. In other words, a strong organizational culture is reluctant to change and can therefore resist innovation. As such, for an innovating company, one challenge of the leaders is to innovate the culture to make it compatible with their strategy of innovation (Euchner, 2017). A corporate culture of eco-innovation will embed the core strategies into the implementation level, permit innovative behaviours and generate eco-initiatives. The diffusion of such culture has a positive daily effect on the promotion of EI.

5.4.2.3. The science of creativity

Eco-innovation cannot exist in isolation from creativity in its endless journey because new ideas are always encouraged for solutions and decision-making. A unique idea and differentiation create organizational competitive advantages. It is therefore not surprising that creativity will become a core skill of organizational capabilities. To reduce the risk of failure and increase the success rate of new ideas, it is crucial to understand the true science of creativity and its know-how. Creativity can be understood as trying to think differently or expressing ideas in other ways. In this regard, creativity deals with effective brainstorming and slow thinking that is actually uncomfortable (Skillicorn, 2017). A person naturally has the tendency to link a circumstance to the similar other situations he/she has already observed/experienced. Even without a conscious thought, a sudden idea is at one's disposition, which is the result of one's tacit knowledge or explicit knowledge. In an organizational setting, when knowledge can be constantly created, transferred and codified, the leaders can direct the employees to think and behave in a desired way. TRIZ, the theory of inventive problem solving, is an example of coded knowledge for innovation, which suggests 40 principles for generating ideas and finding solutions. As such, in an organizational setting, creativity exists in a bounded system and aims for an organizational goal in an orderly fashion. Undoubtedly, for EI, creativity is parallel to eco-mindedness.

5.4.2.4. *Open innovation*

Often used interchangeably with idea management, open innovation is considered a firm's effort to search for knowledge external to the organizational boundary (Garriga et al., 2013). This method is appropriate when an organization seeks an innovative solution that goes beyond its extant internal capacity, often via employing individuals, liaisons or technology license. Relatedly, it is assumed to be more likely significant for incremental innovation than radical innovation because radical innovation is based on commercialization of the innovator's unique idea (Garriga et al., 2013). However, open innovation is valuable regardless of its occurrence among collaborators or competitors (Almirall et al., 2014), given that the actors in the eco-system are inescapably interdependent (Pfeffer and Salancik, 1978). For example, every company might experience the same costly mistakes in their experiment, and one's mistakes will affect the shared value of the eco-system. Open ideas and crowdsourcing in strategic networks are then fundamental for this value chain. From the knowledge-based view, the creation of the firm's knowledge necessarily involves both inflows and outflows for organizational learning and the evolution of knowledge. Hence, open innovation is a good tool to enhance EI provided that the organization knows the right actors and the right moment to exchange ideas.

5.4.2.5. *Lean innovation*

From traditional innovation, "lean" is defined as efficiency and waste reduction, which are congruent with the organizational capabilities for EI. Lean innovation works efficiently with knowledge and involves R&D, product and service development, and other activities of development (Sehested and Sonnenberg, 2011). The process incorporates three principles: do the right thing, do it right and do it better all the time. The first one works well with cost control and waste reduction while maintaining proper communication with recipients and taking into consideration the customer's needs. The second is closely associated with portfolio management, in which optimum planning is needed to foresee the overall path and get the smart fast. Relatedly, the third principle deals with continual

evaluation and improvement over time. Because EI is inevitably put in a context of complexity where there might be a paradox between socio-economic goals and environmental goals and the trade-off between efficiency and creativity, lean innovation is referred to as trade-on by problem solving (Browning and Sanders, 2012). Accordingly, the notion of cost control and waste reduction should be reconceptualized as creating greater value by strategically adding activities and buffering because the value of a system is different from the sum of its constituents (Browning and Sanders, 2012). In this regard, the strategy-based portfolio management mentioned the value of long-term based assessment on an entire portfolio with the intangible benefits of non-value-adding activities. However, significant changes while innovating actually need the stability of the focal business to ensure the effective balance between the input and the output until eco-innovation can offset the cost of environmental investment. Therefore, the “muscle” character of lean innovation also corresponds to pilot innovation with experiments before wide application and full launches.

Overall, for eco-innovation and its commercialization, time is money and mistakes are costly. EI necessarily includes sensitivity to market demand, organizational learning that integrates external knowledge, collaboration and alignment between organizational strategies and practices.

5.5. Pertinence of a systematic review on EI

The study on eco/environmental/sustainable/green innovation is a dynamic and mature field; several systematic reviews have already synthesized evidence on the importance of those types of innovation for the organizational performance. However, none of these studies has ever synthesized the antecedents of EI as an organizational prerequisite for eco-innovation:

- Klewitz and Hansen (2014) provided an integrated framework of strategic sustainability behaviour associated with a broader set of outcomes that are essential for research and practice. This study focused on sustainability-oriented innovation from a broader triple-bottom line rather than emphasizing eco-innovation. Accordingly, the investigation was in the dimension of innovation in small and

medium sized enterprises, including product innovation, process innovation and the reorganization of routines and structure, which is further elaborated by the environmental dimension. Hence, their approach is different from preparation for necessary organizational capabilities for eco-innovation.

- Diaz-Garcia et al. (2015) aimed at providing an overview of the literature on eco-innovation, a recurrent theme in the social sciences and humanities over the study period from 2000 to 2013. This study analysed the literature on environmental-, green- and eco-innovation, which focuses on reducing the negative impact of economic activities on the environment. Although their conceptualization on eco-innovation is aligned with the current systematic review, Diaz-Garcia et al. investigated the term at a multilevel (macro, meso and micro level) rather than examining the determinants for EI at the micro level from resources and capabilities view.
- Adams et al. (2016) conducted a systematic review of 127 publications on sustainability-oriented innovation to explore the innovation activities in which firms engaged to become sustainable. Hence, innovation is regarded as a shift from internally oriented, incremental and efficiency-focused to being more radical and systemic to realize and create social and environmental value in addition to economic returns. The difference between Adams et al. (2016) and the current paper is that it examined innovation in a journey to sustainability and hence is not typically bound to eco-innovation capabilities. Additionally, the current paper values ES from the start and favours environmental issues along with its outcomes.
- Hojnik and Ruzzier (2016a) studied on the drivers for R&D and the diffusion of eco-innovation, but at a macro and meso level. Their findings indicated that the common drivers for different eco-innovation types are regulations, market pull factors, EMS and cost savings, in which regulations are the dominating driving force. Accordingly, most of their identified studies focused on the adoption or diffusion stage of eco-innovation.
- Amui et al. (2017) examined the dynamic capabilities for sustainability, of which innovation is the main issue. This study, which was at the macro level, did not examine either organizational practices or eco-capacity in terms of the organizational capability to develop environmental internal resources to enhance organizational performance and environmental conservation.

5.6. Methodology

5.6.1. Introduction to systematic review methodology

A systematic review is a process that identifies, appraises, and analyses research evidence from primary studies to synthesize and map it (Grant and Booth, 2009; Halilem, 2010). Although systematic review had been primarily used in the medical sciences

(Tranfield et al., 2003), this methodology is more widely applied and developed to review the literature in management (e.g., Jabbour, 2013; Renwick et al., 2013). This method became one of the first explicitly recognized forms of literature reviews in the late 20th century and is now one of the most popular among scholars from various fields of research (Amui et al., 2017; Callahan, 2014; Grant and Booth, 2009).

A systematic review aims at the common purpose of a literature review, including improving evidence-based decision making, identifying the synergies within the existing literature and narrowing the gaps in the research field (Kitchenham, et al., 2009). However, its goal is distinctive to the extent that it restricts the studied areas by setting inclusion and exclusion criteria and seeks to provide insights about effectiveness rather than the answers to more complex research questions (Grant and Booth, 2009). It is important that the literature reaches a certain level of maturity so that it can provide the most complete view for researchers and policy-makers with a rigorous, transparent and reproducible process (Halilem, 2010).

Following Halilem (2010) and Tranfield et al. (2003), this paper goes through a process of 6 steps: (1) formulating explicit research questions; (2) fixing inclusion and exclusion criteria to gather documents; (3) locating and identifying studies that meet the inclusion and exclusion criteria; (4) appraising the quality of the selected studies; (5) data extraction, coding and monitoring progress; and (6) data synthesis/analysis and reporting results. This paper employs a qualitative narrative method (Snilstveit et al., 2012), which relies on making sense of written assumptions/findings in the articles. Data processing and coding are conducted in Excel.

5.6.2. The research protocol methodology

5.6.2.1. Inclusion and exclusion criteria

The first condition is that the documents being recruited must consider EI (innovation capabilities/capacities) as the main concept and respond to at least one of three research

questions. Next, according to Diaz-Garcia et al. (2015), eco-innovation was, in general, a young field of research whose publications started in the past decade (2000-2013) with an increase in publications since 2009. Additionally, Horbach (2008) introduced two German panel databases in which questions on environmental innovation were available in 2001 and 2004. Hence, the systematic review on EI should consider the documents published since 2000-2001. The year of documents between 2000 and 2017 is the second criteria. Third, we chose only online published peer-reviewed papers because we believe that they underwent a rigorous reviewing process by the researchers who have expertise in the field and received approval for publication by its academic community. Books, book chapters, dissertations / theses and conference papers were excluded.

5.6.2.2. Identify and identifying the studies

5.6.2.2.1. Locating and recruiting studies

This step consisted of a systematic computerized search with a multidisciplinary database, including the ISI Web of Science, ABI/Inform Global and Business Source Premier. Because our research does not focus on eco-innovation and general innovation but on their antecedents concerning environmental innovativeness and capabilities, the research chain is as follows: {Innovation AND (environment* OR eco* OR sustainab* OR green)} AND (innovativeness OR capabilit* OR capacit*)

The research chain, representing twelve combinations, was used for keywords available in the abstract and title in all databases. Moreover, the inclusion and exclusion criteria have been applied. A total of 193 documents were identified from 4 databases.

5.6.2.2.2. Selecting articles

This step is comprised of two rounds. The first one involves skimming through the title, résumé and citations of 193 articles. EndNote and Mendeley were used to facilitate this process, and 98 duplicates were eliminated. Next, 95 remaining documents underwent a quick examination via the year of publication and abstract to make sure they are in the field

of eco-innovation and meet the inclusion and exclusion criteria. Finally, 33 articles were selected in the first round.

The second round involves skimming through all sections of the articles. The articles for this round include 33 articles selected in the first round, 6 articles (Bossle et al., 2016; Chang et al., 2016; Dibrell et al., 2011a; Dibrell et al., 2011b; Hojnik and Ruzzier, 2016b; Smerecnik and Andersen, 2011) recruited by snowballing, which is a method of tracking the references of references (Greenhalgh and Peacock, 2005), and 16 articles in an initial literature review. These 54 articles were checked again for their eligibility via the inclusion and exclusion criteria. As a result, a final sample of 40 articles was obtained. These articles were sorted into different categories to see how the literature has developed in different contexts.

The next step is to read 40 articles thoroughly and extract the data corresponding to the research questions, coding and understanding the data, synthesizing and checking the credibility of the conceptualizations and their interrelations. The analysis follows with the result interpretation using the theoretical background. All steps and data have been recorded.

5.7. Results and analysis

5.7.1. Article classifications and statistical description

The sample of 40 articles is classified into 6 categories and is coded as follows:

- Method: A – qualitative, B – quantitative, C – conceptual/theoretical papers, D – Reviews, E – mixed method
- Year of article
- Journal title
- National context (following the nations of the samples to note the empirical context of the studies): the nations are coded into continents, including A – Africa, B – America, C – Asia, D – Europe, and E – various continents
- Geographic origin (following the authors' affiliations to note the contribution of institutions in the field of research): the nations are also coded into continents, including A – Africa, B – America, C – Asia, D – Europe, E – various continents

- Question response (to facilitate the data extraction): 1 – if responsive to research question 1, 2 – if responsive to research question 2 and 3; some articles respond to all three questions.

Contrary to our expectations, no article in 2000-2005 responds to any research questions. The research topic had emerged at just one article per year (2006, 2007, 2009) until it reached a peak in 2011 with 6 articles. Since then, the literature has gradually developed, and 2017 was the most productive with 12 publications. Interestingly, the diversification of methodology and the availability of empirical studies on all continents resulted in a certain level of maturity of the literature. The quantitative method predominates with 26 articles, followed by qualitative articles (7 articles), conceptual/theoretical articles (3 articles), reviews (3 articles) and mixed method articles (1 article). Europe is first in both having the highest numbers of empirical studies and the highest number of participating countries by article, while Asia is second in both categories.

The articles are published in Business Process Management Journal; Business Strategy and the Environment; Construction Management and Economics; Corporate Social Responsibility and Environmental Management (2 articles); Cuadernos de Economía y Dirección de la Empresa; Environmental Innovation and Societal Transitions; Expert Systems with Applications; Industrial Marketing Management (2 articles); International Journal of Entrepreneurial Behavior & Research; International Journal of Production Economics; International Journal of Supply Chain Management; Iranian Journal of Management Studies; Journal of Business and Retail Management Research; Journal of Business Ethics (3 articles); Journal of Business Research (2 articles); Journal of Cleaner Production (7 articles); Journal of Small Business Management; Journal of Sustainable Tourism; Journal of the Academy of Marketing Science; Management Decision; Management International; Quality & Quantity; R&D Management; Sustainability (3 articles); Technological and Economic Development of Economy; Technological Forecasting & Social Change; and The International Journal of Business in Society.

5.7.2. Results and analysis

By synthesizing 40 articles, analysing the main concepts and their interrelationships, this section gives answers to the research questions. An integrated conceptual model for EI at multi firm-levels will be proposed and investigated.

5.7.2.1. *Organizational EI: definition matter?*

Because EI is rooted in the organization's ability and propensity to innovate, it can be viewed as a process that consolidates the individual and group level. Nine articles are found that provide definitions on EI or assumptions on relating concepts that contribute to refining EI. A conceptual definition is « an abstraction, articulated in words, that facilitates understanding », while an operational definition « consists of a set of instructions on how to measure a variable that has been conceptually defined » (Bernard, 2000, p. 36). A conceptual definition will introduce the dimensions of a construct and the meaning of their existence without showing how to measure these dimensions, which is the function of the operational definition. For the conceptual, we searched for the articles that answer the following questions: *What are the constituents and objectives of EI?* Similarly, for the operational definition, *What are the practical implications and applications of EI?*

At the conceptual level, 6 articles are responsive. From their conceptualizations, we choose to define EI as *the firm's eco-innovation orientation, the firm's potential and capacity to deploy environmental human, business and technology resources to maintain the existing eco-innovation or to significantly improve and produce completely new green products and product categories for firm performance and natural environment conservation*. The firm's eco-innovation orientation components include a firm's willingness, strategies towards eco-innovation and management's commitment to eco-initiatives. The concept reflects the firm's capacity, which implies the firm's resources, skills and skill patterns (competences, potential, talent and existing eco-innovation) required to attain eco-innovation capacity.

At the operational level, there are also 6 responsive articles. The fact that these studies are diversified in methodology, research context and main objective grant credibility to a united perception towards EI. Similarly, the different approaches to the capabilities of innovation/eco-innovation together provide a complete view on EI. We choose to define EI as *organizational support for eco-initiatives and collective actions that coordinate the knowledge and expertise of employees, including the creation, development and optimization of resources for the differentiation or the continuous improvement of green products (technological or management related)*. EI itself is a multi-dimensional construct that constitutes a process where the end of the pipe is eco-innovation and the firm's environmental knowledge and competences imply eco-initiative generation and tacit knowledge development. This concept demonstrates the company's effort to create a green product/service/marketing/production mode/business model which is dominant to or differentiated from the other competitors' models in the same market. To generate the eco-initiatives and implement green applications (Pipatprapa et al., 2017), the combination of organizational support and employee participation are fundamental. First, organizational support should appear in the form of a firm's statement towards green initiatives and strategies for eco-innovation management, which are both top-down and bottom-up. The top-down represents the role of top management and middle-managers in giving comprehensive action plans and guidance to employees, while the bottom-up includes the involvement of employees in submitting new ideas. The application of top-down or bottom-up alone is irrelevant. As mentioned before, strategy-based portfolio management is characterized by strategic alignment, and EI needs the combination of both top-down and bottom-up. The process, which coordinates employee's ideas evoked from their immersion in day-to-day business enabling the execution of the firm's eco-innovation goals, is referred to as « middle-up-down » management (Takeuchi, 2013), in which the middle managers play an important role in bridging the gap between the visionary ideals of the top and the reality of front line business. Second, employee involvement, which in the context of EM has transformed to green employee involvement, is an emerging human resource management (HRM) practice that facilitates employee participation, deployment of their capabilities and tacit knowledge, which are considered the root of all development. In sum, this new operational definition not

only enables the measurement of environmental innovativeness at multi firm-levels but also suggests measurement at the employee level.

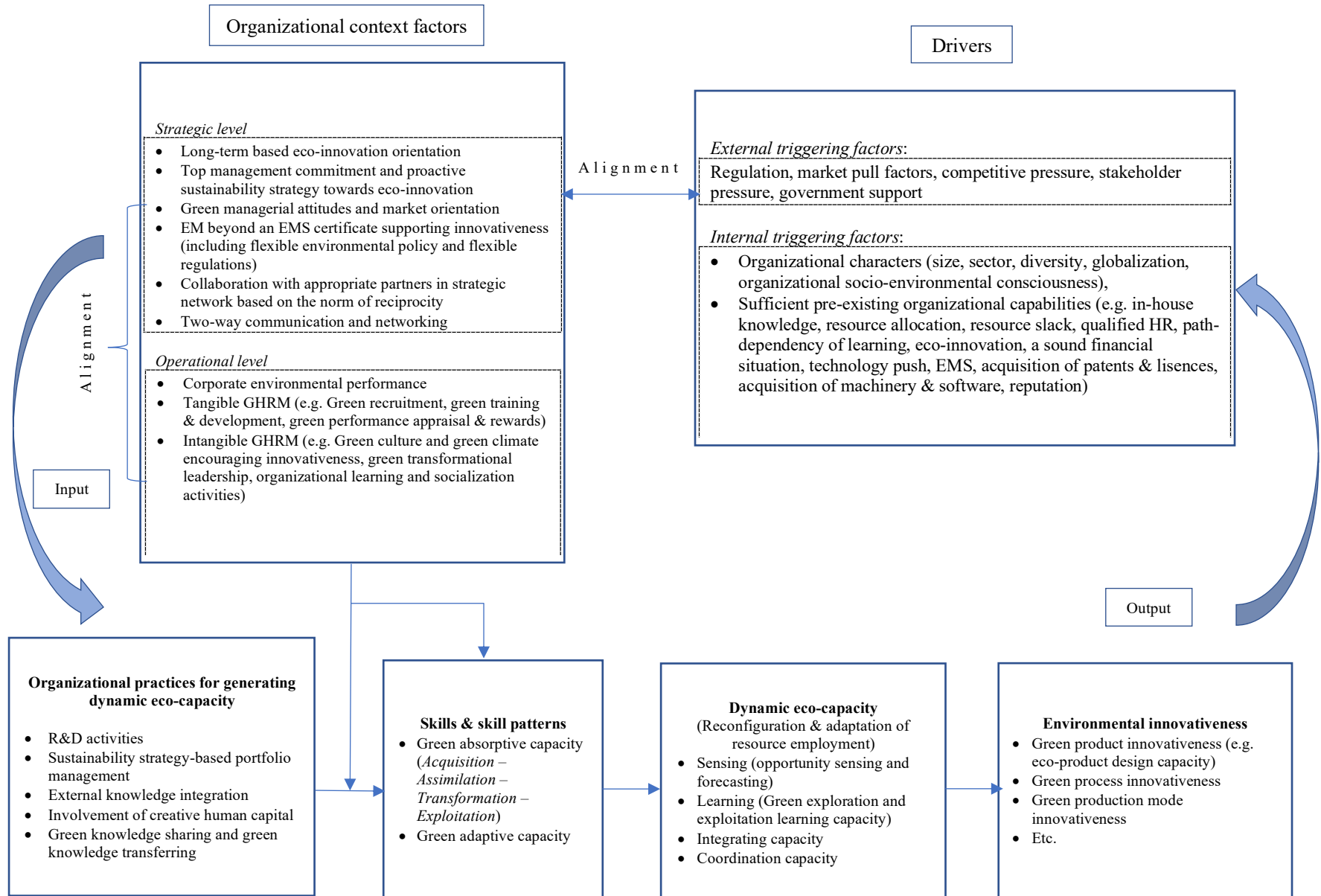
5.7.2.2. Antecedents of organizational EI

Almost all articles are responsive. One exception is the conceptual article by Bamgbade et al. (2016), which gives support for refining EI but discusses only on the role of product innovativeness, process innovativeness and market orientation as a prerequisite for ES in construction within resource management to attain 3R (reduction, reuse, recycling of non-renewable resources) instead of exploring their enablers. Thirty-nine articles with all types of methods are finalized. The data used for coding and analysis are in the form of quoted texts, along with their representative labels extracted from the articles' content or in the form of variables in the main findings of quantitative studies. For data extraction, we first identified EI at multiple levels based on its new definitions. After that, the texts/concepts could be extracted if they respond to research question 2 or 3: *What are the antecedents of EI? How are these factors linked to each other?*

The data are then coded, categorized into different functional groups, re-grouped and re-labelled following the widely known concepts in the literature. The grouping and re-grouping are based upon the meaning-making and the combination of similarities or merging into an embodied meaning. Because this review is meant to explore EI and its enablers from a knowledge-based resource view, the determinants must represent the organizational knowledge-based capacity. Accordingly, the antecedents, which may be the predictors or facilitators for EI, enable the firm's ability to deploy their resources or the firm's capabilities, which may develop into eco-innovation, while the empirical studies (26 quantitative, 1 mixed method and 7 qualitative case studies) supply evidence on mediation and moderation relationships along with their significance. The logic of 5 review/conceptual/theoretical articles reinforces the assumptions or add complementary ideas for our proposed conceptual model.

Since EI is a multi-dimensional construct that reflects both strategic and operational levels, its dimensions can be measured in the same way. Additionally, there are articles that take into consideration the internal and external factors as drivers or moderators. The coding confirms our pre-assumption that EI is a process that addresses the organization's effort at multi levels and that it is an input-output combination of reconfiguration and adaptation of a firm's achieved resources and integration of external resources. The final classification is comprised of 6 major groups: (1) EI as the outcome; (2) Dynamic eco-capacity as the determinant of EI; (3) Skill and skill patterns as the pre-determinants; (4) Organizational practices for generating dynamic eco-capacity; (5) Organizational context factors (at the strategic and operational level); (6) Drivers (the triggering/activating factors that are internal/external to organizational boundary). Figure 5 (next page) is our proposed integrated conceptual model that illustrates the interaction among the groups from an input-output approach.

Figure 5: An integrated conceptual model of environmental innovativeness at multi-layer firm level



5.7.2.2.1. Determinants of EI

Research findings on the antecedents of innovation capability in the context of incorporating ES and those of EI shed light on the green pattern of dynamic capacity (hereafter, dynamic eco-capacity), of which green absorptive capacity is the mostly researched determinant. Additionally, dynamic capacity is referred to as the firm's ability to reconfigure their resources into new combinations of operational capabilities (Albort-Morant et al., 2016) and therefore focuses on the reconfiguration and the adaptation of resource employment (Huang and Li, 2017). Logically, green adaptive ability, the degree to which the organization can adjust its operational strategies (Chang, 2016), is therefore another determinant of dynamic eco-capacity.

Operational capabilities comprise 5 aspects, including (1) operations/processes, (2) product/service, (3) resources/assets, (4) organization/structure, (5) relationship with other actors in the network. Dynamic capacity, which enables the reconfiguration of those aspects, contains 4 functions: (1) sensing, (2) learning, (3) integrating and (4) coordination capabilities (Albort-Morant et al., 2016). Of these functions, green absorptive capacity is inevitably a salient determinant. The idea is more illustrative with the definition of green absorptive capacity by Chen et al. (2015) as « the ability to comprehend, connect, combine, identify and apply environmental knowledge » (p.15677). This conceptualization is applicable at both the organizational or individual level because the acquisition of new knowledge and the green knowledge sharing (Lin and Chen, 2017) as well as knowledge transfer activities of individuals contribute to the continuous improvement of the organizational source of knowledge, which is essential in the context of pursuing the eco-innovation of the organization. At the organizational level, it also demonstrates the coordination of organization with other strategic actors in social exchange relationships. The sensing function of the green absorptive capacity is in the sensitivity to new environmental knowledge, trends and opportunities to facilitate the identifying and learning process. One quantitative study by Wu et al. (2016) investigated the effect of dynamic capacity on eco-innovation in the Taiwanese lighting industry and revealed that path-dependent learning and

opportunity-sensing should be prioritized due to their positive effect on dynamic capacity. However, for the full application of these capabilities, the transformation and exploitation capacities are equally important because they enable the deployment of employee environmental knowledge and, moreover, their tacit knowledge in some cases. As a result, green absorptive capacity is acquired through a process of acquisition, assimilation, transformation and exploitation, as proposed by Gluch et al. (2009). Their model proposed that the integration of external sources, experience and stakeholder pressures enable the acquisition process, which is considered the knowledge gate of the organization, while top management support and internal communication routines serve as facilitator for the exploitation. Their study confirmed that acquisition is the predictor for assimilation, the meaning creating process, which is the predictor for transformation (audit and environmental declarations), and later, exploitation. Interestingly, both transformation and exploitation are predictors for environmental performance. This result supports the idea that the two-way interaction between environmental performance and EI enables the continuous generation of eco-innovation.

Given that adaptation is a requirement for resource employment and reconfiguration, green adaptive capacity is a determinant for dynamic eco-capacity. This demonstrates the firm's capacity to appropriately adjust and the firm's acceptance behaviour to comply with newly acquired knowledge/resource or the uncertain environmental regulations and environmentalism (Chang, 2016), as well as the firm's capacity to handle conflicts. In brief, this reflects the firm's ability to be adaptive and flexible to changes in the environment, which is also required for green exploration learning and green exploitation learning (Chen et al., 2014).

5.7.2.2.2. Organizational practices for generating dynamic eco-capacity

R&D activities and the involvement of creative human capital have recently emerged as a tendency for the improvement of both green products and green process innovativeness. Both internal R&D and external R&D, in cooperation with suppliers, universities and

research institutions, have a significant effect on the process innovativeness (Ramirez-Portilla et al., 2017; Rodriguez and Wiengarten, 2017). Accordingly, the integration of external knowledge is critically important for R&D in general and for the acquisition and development of organizational knowledge in particular. These activities are also facilitated by the involvement of creative human capital (Choi et al., 2013; Scarpellini et al., 2017; Yaghoubi et al., 2017) in the form of internal specialized human resources (HR) with their knowledge, skills, attributes and in the form of strategic partners in the network for referencing and exchanging ideas. Internally, the involvement of creative human capital in these activities, which represents the coordination of employees' knowledge and expertise, needs to be managed appropriately and purposefully for eco-innovation. The role of HR practices should therefore be examined (Scarpellini et al., 2017). Externally, the collaboration in R&D with other actors is indicated by Gluch et al. (2009) as a corporative knowledge process and by Ayuso et al. (2006) as stakeholder knowledge integration, which are considered simple capabilities for dynamic eco-capacity. From the resource aspect of dynamic capacity, firms need enough resources, which include at least human capital and its relations with a sound financial resource to achieve the necessary capabilities (Del Río et al., 2016; Scarpellini et al., 2017). In the context of pursuing eco-innovation, HR is dedicated not only to green knowledge and eco-initiatives (Choi et al., 2013) but also specialized in human capital involved in R&D (Scarpellini et al., 2017) to the enhancement of EI. The quantitative study by Chang (2016) confirmed that green human capital is positively linked to green product innovation through a full mediation of green adaptive ability. The findings remarkably highlighted the role of green adaptive ability in the transition of both green human capital and corporate environmental commitment to green product innovation.

The other activities for the generation of dynamic eco-capacity are green knowledge sharing and knowledge transferring. This is considered a method by which « an organization consciously and exhaustively gathers, organizes, shares and analyzes its knowledge based on resources, capabilities and people skills » (Lin and Chen, 2017). These activities are crucial for the knowledge creation and the development of tacit knowledge, the most advanced pro-environmental stance approach. The knowledge-based theory views a firm as a knowledge-

creating entity, which necessarily occurs in a specific context, namely, *ba*, characterized by a bounded space and time (Nonaka et al., 2000). Nonaka et al. (2000) assumed that knowledge involves organizational assets that are often invisible, tacit and dynamic and thus must be created through the interaction among organizational members or with external actors. There are the cases in which knowledge can be bought from outside via, for example, the acquisition of patents and licences, intellectual property rights, the outsourcing of R&D, consultation and mandate. In brief, both tacit and explicit knowledge are created via people's interaction — for example, through socialization, formal meetings, project teams, external interaction or information technology tools. This knowledge, which developed and accumulated within the company over time, has a higher degree of specificity because of the scarce use outside the organizational context (Urgal et al., 2011) and thus may grant a competitive advantage to the company. As a result, green knowledge sharing and knowledge transferring determine the continuous development of skills and skill patterns in both quantity and quality.

5.7.2.2.3. Organizational context factors

The researchers have investigated a variety of variables/concepts regarding a firm's management and business operation activities, which may serve as an antecedent/determinant of eco-innovation capabilities/EI or a moderator of the generation for dynamic eco-capacity. Although some concepts are named differently in some cases or examined in different contexts, they are derivative concepts or are similar in nature. Additionally, the measurement items and the conceptualizations help identify and group the similar concepts. Finally, we re-group and label new concepts when necessary following the widely acknowledged key words in management and HRM research. In brief, the organizational context factors are classified into the strategic level and operational level, which we assume comprise both corporate environmental performance and GHRM.

At the strategic level. Long-term-based eco-innovation orientation emerges as a powerful predictor for EI. This orientation, as a proactive sustainability strategy (Mariadoss

et al., 2011; Mousavi and Bossink, 2017), embodies the organization's corporate environmental management (Chang, 2016) and organizational creativity orientation (Sriboonlue et al., 2016), which must be clearly disclosed in organizational statements (e.g., vision, mission, declaration). The vision is then coded into an organizational policy system that is embedded in organizational culture so that it becomes a shared assumption among employees. A quantitative study by Chen et al. (2014) found that a green shared vision positively affects green exploration and exploitation learning, which later result in green radical and incremental innovation performance. The authors concluded that the top management team's leadership and effective management facilitate the development of green shared vision. In this regard, other articles have addressed the importance of managerial green attitudes (Dibrell et al., 2011b; Smerecnik and Andersen, 2011) and modern transformational leadership (Sriboonlue et al., 2016) as the drivers for the strategic capability of innovation. Because top management includes those who « walk-the-talk », their commitment, managerial green attitudes and leadership determine their behaviour and influence other individuals' attitudes and behaviours in the same way. When leaders are transformational in style, they enable the comprehensiveness and generalization of green vision, which later form a shared understanding within the company. Both managerial green attitudes and strong organizational environmental policy were tested to be a positive moderator for the relationship between market orientation, which is attuned to general organizational operation, and innovativeness (Dibrell et al., 2011a; Dibrell et al., 2011b). As such, in the case of eco-innovation orientation, we assume that this moderation effect could be stronger at an early stage of the organizational life cycle because of higher market pressure. It can be concluded that the innovation orientation and ES orientation are in a complementary relationship in the process of enhancing EI.

Furthermore, because eco-innovation corresponds to the efficiency management of resources/energy and waste/CO₂ reduction, the adoption of an environmental management system (EMS) is salient at the earlier stage of setting organizational goals towards eco-innovation. The adoption and implementation of EMS can result in obtaining an EMS certificate. However, the literature has stressed that the mere existence of an EMS does not

guarantee eco-innovation, and it should not be considered in isolation with a firm's environmental resources and capability (Amores-Salvadó et al., 2015). Amores-Salvadó et al. (2015) tested the moderating effect of EMS for the relationship between environmental innovation capability and firm performance by taking into account the other elements that go beyond the certification, including for example, a written environmental policy, an environmental learning programme for employees or the improvement of communication structures for environmental information. Their result proved that the stronger the EMS was, the greater the improvement was of firm performance. The findings suggest that for the full effect of the company's EMS or the so-called EM, the company needs to be well-equipped by pre-existing eco-innovation capabilities, which we assume to be part of eco-capacity. This finding confirmed the effect of the complementary relationship between EMS and EI on the firm's environmental and business performance improvement. Indeed, EM was soon conceptualized by Haden et al. (2009) as: « The organization-wide process of applying innovation to achieve sustainability, waste reduction, social responsibility, and a competitive advantage via continuous learning and development and by embracing environmental goals and strategies that are fully integrated with the goals and strategies of the organization » (p.1052).

Two empirical studies (Hamdoun et al., 2016; Scarpellini et al., 2017) support the significant direct effect of EM for the development of eco-innovation capability. In sum, the adoption of an EMS and the implementation of EM beyond the certificate is an important predictor, in which a flexible environmental policy (Dibrell et al., 2015) and flexible regulations (Ramanathan et al., 2017) enhance the creativity and innovativeness. Given that there must be a three-way interaction between market orientation, organizational policy and lifecycle (Dibrell et al., 2011b) and that a firm needs a dynamic approach to external pressure (Ramanathan et al., 2017), those policies and regulations need to be flexible for the adaptation to change.

Given that a long-term-based eco-innovation orientation and vision are the foremost predictors, communicating it within the organization is vital, especially at the early stage of

being widely adopted. As previously discussed, the goal of the organization's eco-innovation orientation is comprehensive policies and codes of conduct embedded in its organizational culture and, further, comprehensive action plan and objectives. Two-way communication is required in the nature of the dialogue in the aforementioned « middle-up-down » management (Takeuchi, 2013). From a stakeholder dialogue perspective, two-way communication is characterized by transparency and appropriate feedback and is empirically found to be an antecedent to dynamic capacity for sustainable innovation, which includes both the environmental and social aspects (Ayuso et al., 2006). Another emerging key element is collaboration within the organization per se or between the organization and appropriate actors in the strategic network. The relationship should emphasize the norm of reciprocity, a social cognition of indebtedness, which posits that benevolence will engender the recipient's feeling of obligation to reciprocate (Huang and Li, 2017). Moreover, reciprocal rewards (pleasure, satisfaction, gratification) or reciprocal buying and selling contributes to mutual reinforcement and, along with time, entails the commitment that is fundamental for the development of the relationship. In the context where an organization is in a complex relationship with various strategic actors, reciprocity is a prominent strategy to both maintain the mutual benefit, contribute to a positive corporate relationship with local community and cultivating goodwill towards the organization (Tadajewski, 2009). Social reciprocity in a relationship with other actors in the strategic network of an organization and coordination capability are empirically found to positively enhance green product innovation (Huang and Li, 2017).

At the operational level. This review highlights the role of green HR and their skills and skill patterns as internal capabilities in the pursuit of EI. In this regard, one quantitative study by Rahman et al. (2015) confirmed that qualified HR with a high level of education, self-esteem, diverse backgrounds and motivation was the most important means (in comparison with financial resource, physical resource, slack resource) to improve resource allocation capabilities for innovation. Inevitably, GHRM practices are promoter/positive moderators in the generation of dynamic eco-capacity. Furthermore, green training & development increases a firm's eco-mindedness, while green organizational learning

facilitates the green knowledge sharing and knowledge transfer within the organization. One quantitative study by Ketata et al. (2015) confirmed that the investment in employee training and education is the antecedent of green absorptive capacity. Other researchers support the idea that these practices are enablers of individual capabilities for environmental process innovativeness (e.g., Chen et al., 2014; Kleef and Roome, 2007; Pipatprapa et al., 2017). Accordingly, for the continuous improvement, a long-term-based green performance appraisal (Pipatprapa et al., 2017), coupled with the rewards programme in the form of organizational support for both the individual and group level, is also a promoter.

Of the intangible GHRM, we propose that green culture, which is part of ethical culture (Riivari and Lämsä, 2014), and green climate, which is part of ethical climate (Choi et al., 2013), are motivators or moderators. Consistent with the theories of innovation, a body of literature supports the idea that a profound green culture that drives towards EI (Kleef and Roome, 2007; Lin et al., 2011; Matinaro and Liu, 2017; Rahman et al., 2015; Riivari and Lämsä, 2014) and green climate/organizational routines that encourage eco-initiatives and favour eco-innovation (Gluch et al., 2009; Urgal et al., 2011;) are deemed appropriate for encouraging employees to try new things, risk-taking and disseminating knowledge.

5.7.2.2.4. Drivers

Considering that the organization is both an entity with pre-existing capabilities, characteristics and an actor in a complex network of which the business operation affects and is affected by other actors external to the organizational boundary (Pfeffer and Salancik, 1978), researchers have identified both internal and external factors that play a part in driving or triggering the performance and the process towards EI. We classified these factors as internal triggering factors (organizational characteristics and sufficient pre-existing organizational capabilities) and external triggering factors, which are driven by external actors. The most frequently cited external drivers are stakeholder pressure (Del Río et al., 2016; Gluch et al., 2009; Hojnik and Ruzzier, 2016a), followed by regulation and market pull factors (Bossle et al., 2016; Hojnik and Ruzzier, 2016a), competitive pressure (Hojnik and

Ruzzier, 2016b; Riivari and Lämsä, 2014) and government support (Bossle et al., 2016). Because business operation is not isolated from commercialization, an eco-innovation orientation requires a firm to dynamically approach a mixed external pressure. The combination of this pressure and firm innovativeness is a determinant for increasing a firm's private sustainability benefits and public benefits (Ramanathan et al.; 2017).

Organizational characteristics (e.g., firm size, globalization, diversity, organizational socio-environmental consciousness) and sufficient pre-existing organizational capabilities (e.g., in-house knowledge, eco-innovation, technology push, path-dependency of learning, a sound financial situation, qualified HR, reputation) are considered a firm's internal force that triggers EI. This finding sheds light on the input-output combination of all achievable mixed resources and activities at all levels in the continuous improvement of EI and in the pursuit for eco-innovation. Accordingly, this dynamic approach illustrates the three-way interaction among corporate environmental performance (and next firm's overall performance), EI and eco-innovation.

5.8. Discussion and conclusion

This paper aims at refining EI at a firm level as an organizational prerequisite for eco-innovation and synthesizing the literature to find their antecedents. Our integrated conceptual model provides a complete view on EI and opens an avenue for future research. The findings have value in giving insights into EI itself and into the dynamic interaction between the organizational factors and external factors for continuous improvement.

First, our definitions of EI exceed previous conceptualizations to the extent to which they provide a more comprehensive and complete view on the concept, exhibiting its objectives and components at both the strategic and operational level. Second, the conceptual model goes beyond previous findings to the extent that it allows the measurement of EI at multiple levels, including individual, group or organizational levels. Third, the findings confirm the consistency between EI and prior theories of innovation concerning strategy-

based portfolio management towards eco-innovation, creativity, the importance of a culture supporting innovativeness as well as collaboration and external knowledge integration. Relatedly, the findings contribute greatly to the knowledge-based resource theory. The main determinant of EI is the dynamic eco-capacity, where the antecedents are practices enabling the firm's knowledge creation and management towards eco-innovation. These practices necessarily coordinate employee knowledge and integrate external knowledge.

Our review reveals some gaps in the literature. First, other factors, including firm size, sector, globalization and presence of government support, were asserted as moderators/drivers for the adoption of eco-innovation and a firm's sustainable innovation orientation. However, they have never been empirically examined for their mediating or moderating effect on EI and hence should be tested in future studies. Second, the results of a quantitative study by Dibrell et al. (2015) tentatively supported the positive moderation effect of organizational social consciousness ($b=0.11$, $p < 0.05$, one-tailed) on the relationship between natural environmental competency and organizational innovativeness. Consequently, a replication of this study in another context is needed to test the effect of organizational social consciousness (to a larger extent, socio-environmental consciousness), which represents the organization's concern for the welfare of others and the aspect of social responsibility. Third, despite the importance of employees and their resources, no studies have ever examined the effect of GHRM practices in facilitating the green absorptive capacity. As EM is found to be an important determinant and the alignment between EM and HRM results in GHRM (Renwick et al., 2013), future studies should examine the moderating effect of GHRM practices, especially those suggested in our model, including green organizational learning, green training & development, green performance appraisal & rewards, green culture and climate. Although our model represents collective actions and investigates the green absorptive capacity and green adaptive capacity at the firm level, future research can examine these mediators at the employee level as well as GHRM in fostering green knowledge exploration and exploitation.

Our findings also suggest new directions for future research. First, eco-design capacity, a newly tested concept, is a dimension of EI that seems to have been neglected by previous research in the field. Eco-design capacity is the ability to develop the product to minimize environmental impact through product design, and the objectives should be to use less material and utilize light weight and recycle material (Dangelico et al., 2017); therefore, it is an important constituent of green product innovativeness. Further investigations on its enablers are encouraged. Second, firm resource availability and complementary technology growth are found to be the two most influential determinants of strategic innovation capacity, which was assumed to be key capabilities for organizational success and survival (Sriboonlue et al., 2016). Hence, technological innovation can be considered an extra EI. Our review found one article by Urgal et al. (2011) confirming the positive effect of a technological knowledge basis (both endogenous or exogenous tacit and explicit knowledge) on innovation capability. Future research could examine how a technological knowledge basis could facilitate green absorptive capacity and green adaptive capacity for EI.

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Chapter 6

THE COMBINED EFFECT OF GREEN ORGANIZATIONAL
PROCESS AND GREEN ORGANIZATIONAL DISTINCTIVENESS
OF « HANDICAP » PRINCIPLE IN ATTRACTING PRO-
ENVIRONMENTAL JOB SEEKERS: A FOCUS APPROACH

6.1. Résumé

Poursuivant la réflexion sur les signaux difficiles à falsifier ou à imiter, ce chapitre examine la notion d'identité organisationnelle. Notre problématique de recherche se situe dans le contexte de la mise au vert, tendance désormais à la mode dans le monde de l'entreprise, où les entreprises vertes présentent des similitudes, mais aussi des différences en termes de catégories écologiques. Ces identités organisationnelles floues suscitent un débat sur la question de savoir si la continuité d'une singularité organisationnelle écologique peut suffire à distinguer une entreprise par rapport à d'autres du même type. La question est donc la suivante : comment un processus organisationnel écologique peut-il engendrer ou impliquer une singularité organisationnelle écologique représentant une caractéristique organisationnelle difficile à falsifier ou à imiter ? A travers une analyse de la littérature actuelle, nous savons que, dans un contexte à forte intensité de connaissances, la singularité en question est une manière de faire organisationnelle qui incarne la valeur écologique d'une organisation. La valeur organisationnelle fondamentale constitue ainsi un attribut de la valeur écologique organisationnelle, notion qui renvoie à une identité organisationnelle écologique spécifique. Cependant, pour que cette valeur écologique soit reconnue et perçue comme étant difficile à falsifier ou à imiter, elle doit satisfaire au critère d'hétérogénéité optimale de distinction (ou de singularité), étant située au sein du système d'identité organisationnelle écologique et manifestée expressément dans chaque fonction organisationnelle. La notion de processus organisationnel écologique fondé sur une valeur organisationnelle écologique dans le but de créer une main d'œuvre à forte intensité en connaissances écologiques est aussi analysée.

Mots clés : Hétérogénéité de la singularité écologique, dynamique organisationnelle écologique, identité organisationnelle écologique, processus organisationnel écologique, attractivité organisationnelle écologique, signal difficile à falsifier.

6.2. Abstract

Pursuing the research on hard-to-fake signal, this paper presumes that it is the work of a green organizational distinctiveness. A research problem is when going green is becoming trendy in today's business, the eco-follow companies share same similarities and differences in green categories. These fuzzy organizational identities will lead to a debate about whether the survival of a green organizational distinctiveness can differentiate a company from any others of same kinds. Thus, the research question is how a green organizational process can entail a green organizational distinctiveness which together constitute an organizational characteristic of hard-to-fake. It is evidenced from an intensive knowledge-based discussion and analysis on current literature that the distinctiveness under question is an organizational ecological value which is core value and describes an organizational ecological characteristic. However, for this ecological value to be recognized and perceived as hard-to-fake, it must satisfy the distinctiveness heterogeneity, being optimally positioned within the

system of green organizational identity and demonstrated expressively in every organizational function. Surprisingly, the summative findings show that a green organizational process to intensify a pro-environmental workforce can determine green organizational capacity to attract potential pro-environmental job seekers in a natural, yet automatic manner.

Article classification: Communication paper

Key words: Green distinctiveness heterogeneity, green organizational dynamic, green organizational identity, green organizational process, green organizational attraction, hard-to-fake signal

6.3. Introduction

This thesis aims at answering three research questions: (i) How should attraction be conducted in the right and corporate ethic manner to generate job seekers' positive perceptions of organisational attractiveness for environment in the one hand and to detect the fit candidates on the other? (ii) What key signalling factor is to make the pro-environmental talents and potentials recognize a true pro-environmental employer with them? (iii) Which pro-environmental signal is hard-to-fake? The studies presented in chapters 1 to 4 identified the know-how of pro-environmental attraction and organisational ecological value as the key signalling factor. The findings of the empirical investigation also imply that this organisational ecological value needs to be perceptive and communicated honestly and consistently in every case.

However, this new insight has so far been implicit as regards what an organisational ecological value is in the context of this thesis. More precisely, which organisational value is the attribute of the organisational ecological value so that this key signalling factor remains unchanged? For the nature of consistency, this emerging question is related to the third thesis question: Which pro-environmental signal is hard-to-fake? so that people can trust the company-signaler's pro-environmental message in the context of corporate greening, an ongoing question in my mind during my 4 year doctoral thesis research so far. Therefore, this chapter is therefore a further research into the know-how (what we already know) to explore the micro-process (what we do not know) in the green organisational process through which the organisational ecological value is formed, becomes stable and hard to fake, and is embedded in organisational manner of doing. Since every organisation is a history of development, the environmental orientation is viewed in this thesis to demonstrate organisational environmental movement of stability and change for corporate green mission. This chapter conceptualizes that manner of doing as green organisational distinctiveness and assumes that its embodying management principles are determinants of the corporate green mission. This is to guarantee CEP practices are neither below standard nor far right conduct in the harmonization with economic and social development.

There is sufficient evidence in the literature on organisational values and organisational identity that together reveal the organisational ecological value to be rooted from organisational core value describing an organisation's ecological characteristic which is more stable in the organisational value system. Because of stability and change, the development and protection of this ecological value need to go through a green organisational process of environmental knowledge creation and knowledge protection, which can only be enabled in a knowledge-intensive organisation. Next, the pro-environmental signal which is hard-to-fake is green organisational distinctiveness being absorbed in the organisational identity system so that the organisational manner of doing becomes identifiable, perceptible and inimitable. In the rest of this chapter, I discuss the logic of the micro-process in order to make these answers explicitly comprehended.

The discussion is organized as follows. In the first section, I revisit the focal point of corporate greening, today's mission of every organisation, which leads to the necessity of greening the workforce – the GHRM focus of this thesis. Accordingly, the green organisational process rooted in organisational ecological value is discussed from a knowledge-intensive perspective. The section ends with a conclusion on green absorptive capacity and green adaptive capacity as two enabling skills of an environmental knowledge-intensive workforce in organisational environmental movement. The second section discusses the protection of organisational ecological value, which determines the hard-to-fake character of green organisational distinctiveness. Finally, the third section reinstates the objective of attracting pro-environmental job seekers and concludes with green organisational capacity to attract to be conditioned by the « Handicap » principle.

6.4. Corporate green mission and supreme value of green workforce

6.4.1. Green organisational process rooted in organisational ecological value

In previous chapters, this thesis introduced a body of literature on GHRM and environmental management demonstrating the same message that doing business in an

environmental oriented way should now be a must to save the planet and ensure organisational life cycle of sustainability. First, both non-green human behaviour and human vulnerability to climate change lead to environmental degradation. The proactive day-to-day business of environmental sustainability performed by pro-environmental people is the only way to harness environmental issues through a nonautomatic positive spillover effect (Verfuerth and Gregory-Smith, 2018). Second, an organisation's focus on environmental sustainability goals is not isolated from socio-economic sustainability and is even beneficial to both economic performance (Heggen, 2019) and financial performance (Chapter 4). This is enabled by managing efficiently the operational costs (Nishitani et al., 2017), enhancing eco-capability of products and processes while ensuring their optimal years of service. Above all, the idea is that the complementary effect of environmental services and organisational environmental performance at a global scale will eliminate negative impacts on the natural environment and create an eco-living future of clean, safe and healthy. This can be achieved by taking into account environmental measurement and eco-design in every organisational function and social responsibility.

In a green business context (such as the case of firms operating in the automotive industry), this thesis has proved that corporate green mission is pivotal no matter which environmental orientation a company is heading for. Of the most traditional meaning, a corporate green mission is characterized by “corporate”, which means an obligation to create wellbeing to all employees (Teal, 1996), and by “mission”, both of which were defined long ago by Want (1986) as addressing “the employees’ need to understand what the company is about and where it is going, forging employee commitment to the company by establishing a set of values which everyone can identify and supporting operational cohesiveness and productivity”. Of environmental-oriented meaning, a right corporate green mission is founded on organisational ecological value embodying the morality and business ethics that are the essence of organisational culture (Want, 1986; Williams, 2002; Vveinhardt et al., 2016) and involves a particular environmental orientation which is focused. From a knowledge-based perspective, this chapter contends that understanding is key to unifying and resolving conflict of interests because each individual has multiple self-identities describing

their self-concepts (Chapter 1, Chapter 4) and may interpret concept differently depending on their state of intensive knowledge and their state of mind. Furthermore, to get rid of the incorrect understanding that is inappropriate or irrelevant to a specifically targeted environmental goal, having more and better available complements (e.g. assets, capabilities) provides higher guarantee as compared to a binary distinction of complements or no complements at all (Bloodgood, 2019), but not at the maximization of every single one. To an accurate understanding and, at higher-order, flawless knowledge, an environmental oriented company needs to go through continuous organisational environmental learning and overcome environmental challenges in order to become environmental knowledge-intensive. This process indicates developmental phases of environmental performance along with green organisational routine that enable the development of environmental tacit knowledge. In consequence, the shared understanding of the corporate green mission becomes green duty of every pro-environmental employee.

6.4.2. Towards an environmental knowledge-intensive workforce to accomplish green duty

When corporate greening is a mission, we take environmental performance as read. In other words, from Y's point of view, it is the duty of every individual. There are two ways of achieving an environmental knowledge-intensive system: intensifying existing environmental knowledge of internal employees or recruiting new pro-environmental talents from outside the company; meaning, internal and external green recruitment. Regardless of the method used, attracting these sources is pivotal for the staff to keen on environmental knowledge economy, and the results of the empirical investigation results (Chapter 4) showed that this can be effectuated from now by building a green organisational memory. In this respect, Hunt and McDaniel's study of organisational memory (1993) found that memory can be formed and facilitated by developing a category that is common to a set of discrete elements and by distinctiveness, which facilitates the reader's encoding of the differences among the items of an episode/category. Referred to the research in this chapter, the category and the distinctiveness are an integral part of green organisational routine. The authors also

noted that the integration of distinctive processing into organisational processing, i.e. the process of interdependence of relational processing, provides a better effect for the encoding, storage and retrieval of information. Based on this logic, I will analyse in next paragraphs the green organisational routine and its spill-over effect, which in later episode will contribute, whether automatically or nonautomatically, to GRS in the generation of OAE.

First, organisational routine is conceptualized to “include human actors and artefacts, and indicate stored organisational learning and knowledge that can enable and constrain organisational actions” (Bloodgood, 2019). Because of their character of reproducing daily behaviours, they create a spill-over effect that transcends from context to context and from person to person by regular observation at work. Routine is beneficial to both organisational survival and knowledge development. To explain this further, the spill-over effect, or the secondary conforming behaviour effect of pro-environmental behaviours on other behaviours, tends to lead previous green behaviours to higher-order, or to higher acceptance of green behaviours or policy (Verfuerth and Gregory-Smith, 2018), thereby engenders the tenacity of pro-environmental behaviours which are perceived by employees as standard. The extent to which those higher-order pro-environmental behaviours are attributes of superordinate will then effectively guide memory search at retrieval (Rawson and Overschelde, 2008) and next, reinforcing the intensive knowledge of performers with significant expertise in that specific environmental domain. At the same time, the consistency of workplace pro-environmental behaviours perceived as appropriate or fitting creates an environmentally sustainable lifestyle of an organisation (Verfuerth and Gregory-Smith, 2018).

Second, because of its originality, green organisational routine is not isolated from corporate green duty. A body of literature has found a variety of regular organisational green practices that are recurrently associated with environmental performance/pro-environmental behaviours, including green shared vision and proactive environmental strategies (Alt et al., 2015; Afsar et al., 2019), a published comprehensive environmental policy (Ramus and Steger, 2000; Paillé et al.; 2013), observable green organisational culture (Massoud et al.,

2008; Allen, 2016; Lasrado and Zakaria, 2019), green performance management (Govindarajulu and Daily, 2004; Zibarras and Coan, 2015; Dumont et al., 2017; Chaudhary, 2019; Lasrado and Zakaria, 2019; Saeed et al., 2019), green rewards and incentives for contribution (Zibarras and Coan, 2015; Chaudhary, 2019; Lasrado and Zakaria, 2019; Peng and Lee, 2019; Saeed et al., 2019), green education and training (Zibarras and Coan, 2015; Chaudhary, 2019; Lasrado and Zakaria, 2019; Ojo and Raman, 2019; Saeed et al., 2019), green employee involvement/empowerment (Zibarras and Coan, 2015; Lasrado and Zakaria, 2019; Ojo and Raman, 2019; Saeed et al., 2019), psychological green work climate (Norton et al., 2014; Afsar et al., 2016; Dumont et al., 2017; Saeed et al., 2019), and perceived environmental behaviour of the organisation (Manika et al., 2015).

Third, from a pro-environmental attraction perspective, green organisational routine has two fundamental functions: to intensify existing sources of environmental knowledge by both effective knowledge transfer and knowledge protection, on the one hand, and to build green organisational prestige trusted by the company's community including its employees, on the other. Knowledge transfer is indispensable for doing research, maintaining the reproduction of everyday existing knowledge and externalizing intensive/tacit knowledge, while knowledge protection means stored organisational learning and the acquisition of new knowledge in a selective manner. Due to employee involvement and empowerment in CEP, pro-environmental employees are given certain degree of autonomy and take responsibility for their green duties, while employee improvisation and work initiation occur naturally and are particularly important for higher-order tasks. Effective knowledge improvisation therefore needs to be encouraged in a controllable manner to support eco-initiatives. In this respect, Krylova, Vera and Crossan (2016) proposed a minimal structure that refers to a set of controls of minimal constraints so as to allow for the moderating effect of improvisation in knowledge transfer and barriers to external imitation. Other proposed practices include experimental culture, storytelling and shared mental model which denote the collective discussions and dialogue that take place among co-workers, all of which are costly to the outsiders to imitate (Krylova et al., 2016). Green organisational prestige refers to the social approval (Chapter 2) for a company's pro-environmental operation and pro-social orientation

in society (Chapter 4). Upon this legitimacy of the company's pro-environmental existence in the community, consistent green organisational routines that conform to environmental law and contribute to the quality of life in society foster trust among the community. Relatedly, green organisational prestige reflects the degree to which stakeholders (the most important of which are employees, customers and competitors) perceive the company's current CEP. Therefore, organisational green capabilities are key attributes for reinforcing this ongoing work so as to prevent a decline in trust. However, for it goes along with the environmental movement of an organisation and is associated with a company's ongoing work on its green identity, which explains the organisation's reason for existence (Few and Few, 2018), building green organisational prestige is inherently about taking into consideration stakeholder expectations. Nevertheless, satisfying their expectations is enacted progressively in accordance with organisational planning. The reason is that this ongoing work requires the tenacity of the company's focused environmental orientation, which cannot undermine the green foundation to protect the organisation's green "hard-to-fake". Thanks to this tenacity, the company is able to establish a green organisational image in the mind of its community and potential pro-environmental talents.

Last but not least, individual habit is among the strongest within-individual enabling factors of pro-environmental behaviours at work (Dilchert and Klein, 2018), but a habit also restrains an individual in actualizing these types of behaviour (Chapter 2). Therefore, maintaining a fundamental green organisational routine of high virtue is central to the green foundation of workplace pro-environmental behaviours which are essential to green jobs and live on with time.

6.4.3. Green absorptive capacity and green adaptive capacity: two necessary skills for organisational stability and change

"The tension between the old (the tradition) and the new reflects a deeper tension between basic philosophies of control and management" (Simons, 1994).

This section approaches environmental movement from a perspective that views an organisation not as a static entity but as an internally moving entity. For decades, researchers

have continued to explore the question of stability and change, an ongoing challenge for contemporary organisations (Leana and Barry, 2000; Feldman, 2003; Farjoun, 2010; Bartlett et al., 2011; Golant et al., 2015; Kreiner et al., 2015; Patora-Wysocka, 2017; Gilstrapa and Hartb, 2020). Most studies have described the dilemma as duality of contradictory and mutually enabling (Farjoun, 2010), as simultaneous experiences (Leana and Barry, 2000), as the production and reproduction of routine (Feldman, 2003), as a radical and spontaneous change and an evolution that co-creates business reality (Patora-Wysocka, 2017), in which employees are routine-makers and engage in pro-active, adaptive and proficient behaviours (Gilstrapa and Hartb, 2020). « The wind is blowing », as Norbert Elias once noted, and everyday work performance varies in intensity, ranging from low to high, organisational routine is therefore not static but changeable (Patora-Wysocka, 2017). There are several other explanations for this notion. For example, constantly changing is an inherent characteristic of the business environment for the unplanned situations, since the forces which are external to an organisation influence its business operation (Chapter 4), or the organisation itself is moving for betterment that both secures organisational survival and offers effective environmental solutions. From a knowledge-intensive perspective, the organisation as an entity is gradually improved through knowledge creation, and intensive-knowledge organisations always seek to learn from practical organisational experience and skills to adjust rightly their evolution with the aim of both protecting competent organisational knowledge and transferring organisational knowledge to the next generation.

In this regard, organisations require dynamic capability geared to stabilize the movement of effective organisational change and define the path of evolution and development (Zahra and George, 2002). Accordingly, absorptive capacity (Zahara and George, 2002) and organisational capacity to adapt are central to a full understanding and accurate specification of past values as well as to the continuous reassessment of the efficacy and appropriateness of routines (Golant et al., 2015). In the emergence of corporate greening, organisational dynamic eco-capacity is important for the stabilized movement of CEP while a company is changing towards an organisational environmental orientation. Likewise, for eco-innovation orientation in the long term, Chapter 5 found that dynamic eco-capacity is the

determinant of environmental innovativeness, which is in an input-output reinforcing relationship with environmental performance, and green absorptive capacity and green adaptive capacity are two key constituents. This knowledge-intensive capacity is essential at either organisational level or employee level, meaning that a company needs to build a tough pro-environmental workforce of green absorptive capacity and green adaptive capacity to both accept and react speedily to an incremental or radical change, and to be resistant to a change. The former reaction plays a pivotal role for a necessary change, while the latter reaction hampers a change in the accomplishment of an organisational green duty.

At employee level, empirical studies in the field of GHRM-EM have found that individual differences impact moderately employees' commitment to pro-environmental behaviours, some of which factors are individual environmental attitudes (Bissing-Olson et al., 2013; Paillé et al., 2013; Lamm et al., 2015), individual environmental traits and values (Graves et al., 2013; Dumont et al., 2017; Ruepert et al., 2017) and individual emotion and enjoyment of environmental matters (Graves et al., 2013; Robertson and Barling, 2013; Afsar et al., 2016). Conversely, within-person factors can cause the variance in employees' green behaviours at work. As found in Chapter 1, personal attributes vary in kind and degree among employees and person-organisation incompatibility can occur. This notion was also found to be true in the case of the empirical data reported in Chapter 4. Additionally, daily affects influence and probably alter employees' daily task-related pro-environmental behaviours even when they had the intention to do so on the previous day (Bissing-Olson et al., 2013; Norton et al., 2017). Accordingly, stable individual differences and stable emotions at work are more assured to the implementation and pursuit of environmental goals and to buffer the effect of unplanned situations. To a greater extent, it requires from the individual the capacity to focus on task-related environmental performance in accordance with organisational plan and the resilience in crisis situations and during within-person conflict of interests. There is now substantial evidence showing that the controller of focused environmental performance comes from both within-individual factors and the organisation (outside-individual factors). Accordingly, there are basically two ways to maintain the viability of the mechanism of stability and change: setting clear boundary systems of interactive and diagnostic controls

(Simons, 1994) and building pro-environmental employees of self-control. Therefore, an emerging question is how this control system can be feasible to implement the dissociation while not limiting the interactive socialization for continuous learning. If there was a restart, recruiting pro-environmental individuals of self-control and eco-dynamic capacity would be preferable. However, this is unrealistic and insufficient to the extent that employee tenure can never be taken for granted and that specifically targeted environmental orientation at the organisational level requires polyvalence that not every employee can afford, including, for example, creativity, coordination skills, teamwork, analytical skills, negotiation skills, leadership and self-management, meaning that an organisation has different pro-environmental competences of favor for different positions. In this regard, an employee is prone to lack competences before organisational entry. Similarities and differences exist as a stubborn organisational attribute or an organisation's fact as they are embodied by the organisation's employees, and new staff bring their attributes to a group, department or organisation. Therefore, a company can always proactively enact a control system of minimal structure being characterized by the given autonomy and strong organisational ecological value that reflect its belief system. The ecological value and belief system built within its ethics of corporate greening define boundaries and limits for different socio-environmental activation triggers and enhance the pro-environmental capabilities of employees. The development of these capabilities is achieved through lifelong organisational environmental learning, employee development programmes and opportunity creation. Most importantly, developing and continuously improving green absorptive capacity and green adaptive capacity based on the green foundation of organisational ecological value in alignment with the development and protection of an organisational environmental economy of knowledge are crucial to its environmental movement.

In this respect, the results of the empirical investigation results presented in Chapter 4 indicate that the compatibility between employees' ecological values and organisational ecological values is associated with the employees' agreeableness to the company's pro-environmental behaviours. This latter therefore increases employees' green adaptive behaviours. It can be drawn from this viewpoint that green adaptive behaviour is relative to

green acceptance ability. Furthermore, Chapter 5 found that green absorptive capacity encompasses green knowledge acquisition – the accumulation of intensive knowledge (Zahra and George, 2002) – and is an attribute of green sensing which is the ability to identify and forecast an environmental opportunity or threat. Accordingly, pro-environmental capabilities demonstrate the organisational capacity to collaborate, allocate and manage organisational resources efficiently and to rapidly counteract environmental threats and risks in a proactive manner. From a recruitment perspective, it is beneficial for a company to recruit and promote an internal environmental locus of control which refers to an individual's attitude about personal responsibility and felt obligation to environmental protection behaviours (Afsar et al., 2019). This is because this personality is found to strengthen the relationship between the indirect effect of responsible leadership on employees' pro-environmental behaviours through green shared vision (Afsar et al., 2019). Therefore, I assume that pro-environmental employees who have high internal environmental locus of control are more likely to exert correctly their deliberate practices for corporate green mission.

From a knowledge-based view, the development of green absorptive capacity and green adaptive capacity is viable through tacit knowledge transfer. Theoretically, organisational knowledge has been conceptualized in two forms: explicit and tacit. Explicit knowledge encompasses the codifiable and written knowledge that can be stored in a database and that is transmitted within an organisation (Schreyögg and Geiger, 2007; Joia and Lemos, 2010; Scully et al., 2013). Therefore, this type of knowledge can be fully expressed verbally and nonverbally. By contrast, tacit knowledge is subjective, embedded within experience, practices, traditions, and beliefs (Scully et al., 2013; Andrews and Smits, 2018) and almost inaccessible (Boiral, 2002). This form of knowledge is often acquired through immersion in practice and can be transformed into knowing or ability through either practical immersion or indwelling through repeated tacit inferences in organisational learning (Muñoz et al., 2015). Since tacit knowledge is highly detailed and context-specific (Boiral, 2002; Scully et al., 2013), some kinds of organisational tacit knowledge are valuable for a company to the extent that such knowledge is embodied, implicit and difficult to outsiders to imitate or operationalize (Andrews and Smits, 2018). For example, an organisation's internal

environmental orientation, which represents an organisational commitment to ecological value and the extent to which this value is promoted among employees and in operation, is empirically found to be positively associated with individual task-related green behaviours, including recycling behaviour and energy-saving behaviour (Salvador and Burciaga, 2020). As such, the greater the ability of a company to facilitate tacit knowing, the greater the likelihood of it creating shared understanding and shared perceptions within its boundaries about organisational ecological value, and the greater the tendency of employees to be committed to task-related pro-environmental behaviours. Examples of advanced practices include an adequate level of common language or specific institutionalized jargon in the company (Joia and Lemos, 2010), interactional expertise and a history of working together (Scully et al., 2013), integrating tacit inferences in different acts of comprehension (Muñoz et al., 2015) into green organisational routines, and role rotation in teamwork (Olaisen and Revang, 2018).

To date, when carbon and energy productivity is being central to the environmental operation performance, a company tends to take into account the synergy between organisational orientation (environmental management and green supply chain) and strategic orientation (green market orientation) in organisational planning (Ardito and Dangelico, 2018). Accordingly, a company's environmental goals become increasingly specific and focused to meet its strategic stakeholders' requirements while sustaining organisational ecological value. Environmental tacit knowledge management is purposeful and should be managed in such a way that some knowledge remains tacit while other key aspects of knowledge should be paid particular attention (Boiral, 2002). If a company is able to manage its environmental tacit knowledge in this way, it is more likely to be able to prevent environmental malfunctions, identify abnormalities and meet environmental targets as planned (Boiral, 2002). Other benefits include enhancing green absorptive capacity and differentiating its experiences and forms of life (Ribeiro, 2013) in the green market and, above all, disseminating its belief system associated with organisational ecological value and norms.

6.5. Organisational ecological value: an organisational knowledge of distinctiveness to be protected

6.5.1. Functional role of green organisational identity and green organisational distinctiveness

As defined above, a corporate green mission necessarily indicates “what the company is about” (Want, 1986) in the field of environmental sustainability. Most importantly, a green organisational identity is to justify “where it is going” (Want, 1986), meaning a specifically targeted environmental orientation. In so doing, the company constructs a green organisational identity that both classifies it into green categories in a green market and industry and distinguishes it from other companies within a same green category. As a result, this built-in green organisational identity brings positive outcomes, the most important of which is a green decision-making foundation. For example, decision-making needs to involve some positive financial performance in the short-term, including returns on investment for positive audience evaluation, which is shown in capital flows (Smith, 2011). Another example is organisational pragmatic legitimacy (Bhattacharyya and Cummings, 2015) for approval and continued support of the strategic stakeholders to whom the company is a part (Few and Few, 2018). To create a green competitive advantage and, especially, a trusted green organisational image, a green organisational identity solely indicating the similarity of a company to other actors in the same category is insufficient. A company also needs a green organisational distinctiveness that distinguishes it from any other competitors of same kind. Notably, a green organisational identity can encompass green organisational distinctiveness, but not vice versa. One major objective of this chapter is to discover what constitutes a hard-to-fake pro-environmental signal in the context of corporate greening. The logic is that the green organisational distinctiveness (the manner of doing) can be hard-to-fake provided that it asserts the company’s uniqueness, is sustained and appeared with organisational identity. In what follows, I discuss green organisational identity and green organisational distinctiveness as part of ongoing research on a specific environmental

oriented company and the necessary combination of these two factors in achieving outstanding environmental performance and attracting pro-environmental job seekers.

First, constructing green organisational identity is an ongoing work (Few and Few, 2018) with which a company identifies and through which it retains its distinctiveness, which is believed to be optimal when, in comparison with other categories, it is neither too coherent nor too distinct and neither too incoherent nor too indistinct from its residing category system (Lo et al., 2020). In other words, optimal green distinctiveness is about adaptively positioning the company at a sufficient level of similarity and difference (Gioia et al., 2010). Revisiting the literature on organisational identity, I find that the concept is formulated to “capture organisational members’ belief about the organisation’s central and enduring features” (Few and Few, 2018). It incorporates tangible elements (e.g. patents, licensing, registered trademarks, copyrights, competences, markets, etc.) and intangible elements (e.g. missions, management philosophies, culture, rituals, values, norms, etc.). The focus of the discussion in this chapter is the intangible organisational identity, which involves driving and providing guidelines for and explaining employees’ behaviours. In this respect, an empirical study by Golant et al. (2015) viewed organisational identity as a work-in progress comprising the dynamics of retrospection with lessons learned that “enable continuous reassessment of the efficacy and appropriateness of established routines and the taken-for-granted understanding of the legacy from the past”. Most importantly, their findings reveal the thoroughness and precision of organisational values, which were found to be critically important and to reconcile the debate between the consistency of past values and adaptive flexibility in the present. By applying a strategy of continuous adaptation, a company is able to respond to the changing expectations of current stakeholders (Golant et al., 2015). In a qualitative empirical study carried out by Evans (2015), the author conducted 75 interviews with employees from 14 public radio organisations with the objective of exploring how views about competitors inform organisational identity discourse with regard to strategic change in an enactment cycle which, if ignored, can put a company in insecure competitive situations, cause it to miss opportunities or hamper innovation. The results showed that members think about the competition differently and how they perceive about the competition (both competition and

cooperation or no competition at all because of their potential market niche) reflects how they make sense of their organisation and affects their strategic decision-making (Evans, 2015). One implication of this empirical result is to refine the findings presented in the previous section on adaptation of necessary adjustment, or organisational environmental innovativeness (Chapter 5) for a company's stabilized environmental movement, highlighting its strategic cycle of stability and change to ensure the continued alignment between consistency and eco-innovation despite of difficulties.

Second, every company operating in a green market is, whether expectedly or unexpectedly, placed in a competitive situation that cannot be disregarded since the competitive phenomenon is actually co-created by other actors or involves the focal company. Likewise, an emerging question is: How can a company stand out of a competition when it is always being followed? The answer is to be found in green distinctiveness heterogeneity. In a competitive market, a company's environmental orientation and its green action tend to be followed or imitated by other rivals since green business actors tend to want to dominate or expand their green market share. A foremost reason should be that companies' behaviours affect consumption behaviours in the same green market and, therefore, affect each other's green business. In this respect, creating a green organisational identity operates as a strategy to protect the focal company's position and green market segmentation, while having a green organisational distinctiveness serves to preserve the organisational ecological characteristic and to protect the company from falsification by competitive imitating behaviours. Limited competitiveness can boost a green market quality while high competitiveness creates an « arms race », which, if out of control, may pull a company back from its green quality. Therefore, this chapter assumes that the combination of green organisational identity and green organisational distinctiveness is a solution for harnessing competitiveness in a green market. In other words, if every company in a same green category system is able to demonstrate its similarities and differences compared to others in the same category of neither below standard nor extremism, they will be able to protect themselves and to construct together a sustainable green market based on corporate ethics and high green standards. From a knowledge-intensive perspective, environmental knowledge exchanges

with appropriate actors in strategic networks and external knowledge integration play an important part in forging organisational eco-dynamic capacity and environmental innovativeness (Chapter 5). The fact that collaborating actors follow and learn from each other is conducive to the betterment of greenness and to adherence to the basic rules needed for green societal stability. This viewpoint underscores the transferable nature of organisational competencies involving in transmitting some of the components of a company's tangible green identity. Therefore, intangible green organisational identity is important for environmental knowledge protection, especially the tacit, since it "infuses an organisation's competencies with a deeper level of meaning (meaning beyond simply providing a competitive advantage) by connecting the competencies to core organisational features" (Few and Few, 2018). In this regard, a company can research distinctiveness heterogeneity (Haans, 2018), which indicates the degree to which it should be pro-environmentally different from others in a same green category, and invest more effort in creating a distinct green organisational competency through operational excellence which was defined to be processes of specialization, quality control and cost monitoring for operational efficiency (Rant, 2015).

Third, although organisational identity is a built-in process, the formation of a workable identity takes into consideration the outsiders as well as micro and macro external influences, claims if any must be made overt to each other and to the outsiders to legitimize the claims and obtain consensual acceptance (Gioia et al., 2010). Additionally, responsiveness to competing claims needs to address "what is essential or negotiable, what is consistent or changeable, and what links or separates who we are" (Kreiner et al., 2015). In any case, it is a full circular process that fundamentally addresses reflection, self-reference, and self-definition (Gioia et al., 2010). Linked to the context of the corporate green mission, it requires purposive endeavour from environmentally responsible managers in maintaining strong basic ecological values for organisational stability and making organisational green goals understandable to employees, as noted long ago by Simons (1994) in relation to a management process in a constantly changing environment of challenges. Accordingly, to forge a green organisational identity that encompasses an optimal green organisational

distinctiveness, managers define the values and orientation of the organisation by “asserting uniqueness, providing prestige to group membership and using formal beliefs as symbols of what the organisation represents” (Simons, 1994).

Taken together, there might be an argument over what is sufficient level of optimal green distinctiveness, what organisational ecological values are formal belief systems and what degree of tacitness makes a difference of intensive organisational environmental competencies. To tackle these issues, this chapter is set out to address the deeper know-how by explicit understanding of the consolidated constituents that all carry formal organisational ecological beliefs. Indeed, the classical theory and the literature on organisational identity imply that there is no common optimization applicable to all environmental oriented companies. Instead, green organisational identity is workable when it is allowed to be constantly recalibrated by organisational members (Golant et al., 2015) for its adaptability to present environmental policies and practices and the accuracy of traditional organisational ecological value in the present. Consistent with the previous literature on organisational values, this chapter contends that for organisational ecological value to become a formal belief system, it must be core value since “core values are deeply ingrained principles that govern all the organisation’s actions and they are the source of organisation’s distinctiveness that must never be compromised” (Vveinhardt et al., 2016). Although core values are needlessly to be explicitly stated in written documents (Vveinhardt et al., 2016), these belief systems exist both in the form of shared understanding among employees (i.e., explicit knowledge about the organisation’s fundamental principles found in every organisational function) and in the form of shared perceptions (i.e., tacit knowledge acquired from operational excellence). The latter refers to details of accuracy which make the difference and tells an organisational history of greening. In short, intangible organisational ecological value is central in that it “provides the basis for evaluating the organisation’s legitimacy and justifying its distinct purpose” (Few and Few, 2018).

6.5.2. Green organisational distinctiveness: a hard-to-fake signal?

Both the theoretical findings (Chapter 1) and the empirical findings (Chapter 4) on this thesis indicate that ecological value fit is the necessary condition for green candidate attraction and green employee life cycle (Zibarras and Coan, 2015). The implication is that from an employee perspective, perceived ecological value fit with the organisation represents the employee's fit with the employer's pro-environmental behaviours derived from the central organisational ecological value, associating with job satisfaction and employee retention. In this sense, the employee experiences a felt green psychological connectedness with the organisation which is maintained by the company to meet the employee's green psychological needs. With the current major contemporary environmental problems being addressed throughout the world (alarming global warming, climate change, natural disasters, air pollution, etc.), a more effective approach is for a greening company to realize and refer its central ecological value to the ethics of environmental protection, as set out in a study by Renaud, Morin and Fray (2016), who found that participants were more attracted to an organisation if ethics matter to this employer. This issue raises the central question of this thesis on the hard-to-fake signal of honesty, which differentiates a true pro-environmental company from greenwashing and deception. Accordingly, this chapter shows how a company can effectively make use of its existing ecological value to either attract pro-environmental job seekers in the right ethical manner or protect itself against competitive imitating behaviours of the rivals.

From the above findings, I argue that the distinct organisational ecological value is a hard-to-fake signal of honesty since it appears in every organisational function, justifying the organisation's pro-environmental behaviours and environmental orientation, and is absorbed into employees' perceptions and behaviours. Furthermore, in defending this assumption, I assume that the distinct organisational ecological value is costly to imitate and, if that is the case, it is short-lived since, on the one hand, imitating what is unreal to the performer's belief system is so uncomfortable and, on the other hand, the performer's imitating behaviours would somehow reveal their real belief system or the inconsistency of their behaviours. The

logic and consistency of observable behaviours were defined in Chapter 2. Most importantly, a distinct organisational ecological value describes the company's organisational ecological characteristic (Williams, 2002), which hardly changes over its lifetime. Additionally, it establishes a green organisational style expressed in its pro-environmental attitudes, environmental knowledge and practices. If this organisational ecological trait is perceivable information in no matter where pro-environmental employer appeals to pro-environmental employees/pro-environmental job seekers, potential recruits will perceive and recognize the company's green organisational distinctiveness insofar as it reveals the company's uniqueness. For example, making inferences about Y's pro-environmental signals in category of technology and engines, two focus group participants (Chapter 4) have a perception of the company that probably went beyond the category itself, such that "they have an implication" or « they aim to deliver a unique perception through the message". In the case study of Y, although the focus group participants had a limited amount of time to research and interact with the company's environmental-related issues, meaning that their perception of Y's ecological value was somewhat abstract, they were able to make such inferences because the company's consistent pro-environmental signals led them to perceive undeniable pro-environmental standard and reliability. Accordingly, this points to Y's green style of doing, which must be long-lived because it is observable based on former employees' expression about Y, the HR staff's regards about Y, and Y's behaviours in the community over the years. In brief, to ensure the hard-to-fake feature of a distinct organisational ecological value, there are two conditions:

First condition. The previous section showed that the distinct organisational ecological value needs to be embodied in an optimal manner in formal organisational pro-environmental practices and behaviours that serve as their green identification, are explicitly described and are verifiable. These green organisational identifications can be in the form, for example, of written texts, statements, announcements, certifications, credentials broadcasted on trusted official channels of communication or in the form of recorded and reported green organisational routines. This manner of proceeding is also applicable to tangible green organisational distinctiveness. In other words, the green organisational

identity encompassing a green organisational distinctiveness has a greater effect on green candidate attraction since it is then easier for pro-environmental candidates to recognize, understand and memorize the company's environmental oriented objectives thanks to the company's similarities and differences compared to other same companies in the industry. This effect is consistent with the literature on organisational memory. Based on the findings of Hunt and Smith (1996), assuming that environmental-oriented signals are cues for recalling green organisational memory (previous items), the distinct organisational ecological value (uniqueness) and the explicitly expressed green organisational identity are in a cue-target relationship that ensures cue effectiveness for a company's environmental oriented objective. Accordingly, the authors suggested that unique cue production at encoding produces better effects when performed through shared cues, representing the identified difference of unique item among similar shared items in a category processing. For example, in the case of Y, addressing the engine (the unique cue) with descriptive environmentally-friendly efficiency and clear objectives in the category of technology of similar functions with other carmakers' is a more effective approach to pro-environmental signalling. Additionally, the pro-environmental message signals Y's orientation towards clean technology. Likewise, from a knowledge-intensive perspective, the findings from the focus group discussion (Chapter 4) showed the effectiveness of pro-environmental keywords, the well-defined concepts of insight and environmental context that can perform a unique role in storytelling for participants' encoding and retrieving and for activating their ecological values. This cue-target relationship is more effective in detection and recall for those with intensive knowledge/prior experience of the unique cue, meaning pro-environmental sensitivity.

Second condition. This condition is consistent with the findings of Hunt and McDaniel (1993) relating to the beneficial combination of similarities and differences being represented in organisational processing and distinctiveness, respectively. The implication is that a company needs to develop a green organisational memory in the minds of potential pro-environmental employees, from which they can then define organisational ecological characteristics. As previously noted in this chapter, this is about a green organisational

process involving green organisational routine and a workable green organisational identity characterizing an optimal green organisational distinctiveness. In so doing, the company is able to self-define and protect its distinctive organisational ecological value aligned with its formal belief systems, thus becoming hard-to-fake. To clarify, information tracing and verification are natural tendencies in those who seek or need to acquire knowledge about a pro-environmental employer. Accordingly, the results presented in Chapter 4 highlighted the idea that a consistent green organisational process, whether stored or not as a memory in participants' minds before their present encoding moment, is beneficial to their information referencing/tracing behaviours as well as the process of reflection (retrieval). Importantly, when the company's current pro-environmental behaviours were aligned with what the participants had already observed or knew about the company or with the green organisational process reported through accessible and reliable sources, participants were able to verify and be confident of their inferences about the company's trustworthiness and pro-environmental behaviours. Furthermore, when the distinct organisational ecological value identified within its boundary (system of green organisational identity) is perceived as correct in both the past and the present, its green organisational distinctiveness becomes a hard-to-fake signal and enhances participants' trust in the core value but also in the organisation's overall ecological values. Last but not least, the more knowledge a participant has about a category that includes a unique cue (displaying the distinct organisational ecological value) and is represented by that unique cue (e.g. a concept in a green category), the more rapidly and profoundly the participant catches on to the cue and understands the company's pro-environmental message.

In summary, this chapter has so far reinforced the findings of the empirical study presented in Chapter 4 on the necessary condition of consistent organisational ecological value as well as the consistency between past and present CEP practices of a company, and the findings in Chapter 5 on the necessary condition of green absorptive capacity and green adaptive capacity in the process of continuous reflection on the specification of past values in the present and in the adaptation of new environmental knowledge to existing organisational formal belief systems. Most importantly, this chapter adds substantial value to

previous chapters by defining hard-to-fake pro-environmental signal, capturing the environmental movement in a micro-green organisational process in order to proactively attract pro-environmental job seekers, both extant employees and future employees.

6.6. Organisational green capacity to attract pro-environmental job seekers as conditioned by the « Handicap » principle: a conclusion

Researchers in the field of HRM have conceptualized organisational attraction and applicant/candidate attraction in an overlapping manner that makes it difficult to recognize the difference between the two concepts. Therefore, it is worth examining the concept of attraction in a recruitment context from two separate perspectives, as noted by Renaud, Morin and Fray (2016): the organisation's perspective and the participant's perspective. Because a job offer must be accepted by a candidate in order for employment to occur, and because this process is influenced by the extent to which the job seeker perceives the employer to be a truly pro-environmental organisation and employer, this thesis represents an attempt to view organisational attraction from the participant's perspective. Therefore, its aim was to examine targeted pro-environmental job seekers' perceptions, rather than employers' perceptions, with a view to improving green recruitment practices to gain their perceptions of organisational attractiveness for environment. However, the management principles researched in this thesis restrain winning their positive perceptions in any way possible to a company or as best as this employer can. More specifically, the applied science of the « Handicap » principle in a corporate greening context serves to define the boundary between the organisational green capacity to attract as an all-inclusive concept and the organisational green capacity to attract under as for the purpose of green recruitment. The former encompasses organisational green capabilities, meanwhile, the latter are managed in an effective, selective, corporate ethical manner (Chapter 4) that focuses on targeted pro-environmental talents to the employer who are presently or potentially seeking a green job. In other words, green organisational capacity to attract during a GRS is purposefully managed for environmental-oriented target and green employment goal. From an observer's viewpoint, the organisational green capacity to attract examined in a green recruitment

campaign to fill a job vacancy is a vignette in its entity and the extent to which it diverges from itself is contingent on the degree to which an employer exposes themselves to pro-environmental candidates. This chapter assumes that the above discussed organisational ecological value within its optimal heterogeneity of green organisational distinctiveness should be maintained in every case to facilitate the employer's search for and detection of person-organisation fit in terms of ecological values and then person-job compatibility. Therefore, the point is to manage the organisational green capacity to attract in order to meet the requirements of the « Handicap » principle, which is basically driven by the effectiveness and resource-efficiency objectives of GHRM.

Chapter 4 comes up with the notion that green candidate attraction must be targeted at pro-environmental job seekers in a green employment context wherein a green employer is capable of offering a suitable position and suitable pro-environmental applicants are searching for a job. From a knowledge-based perspective, these concluding remarks need also to be applied when recruiting talents or potential employees to the company regardless of their current position provided they are detected early in a GRS process to be able to develop their environmental skills in line with strategic HR environmental learning and development programmes, to invest their effort in corporate green mission and to take responsibility for their green duties. To this end, environmental strategies beyond HR practices must be designed to deal with talent management, which has been found in the literature to be aligned with attraction and retention or conservation and planning of talents (Morin, 2007; Mehdiabadi and Li, 2016), which is referred to, on this thesis, as pro-environmental talent planning and attraction. Nijs et al. (2014) defined talent as follows:

Talent refers to systematically developed innate abilities of individuals that are deployed in activities they like, find important, and in which they want to invest energy. It enables individuals to perform excellently in one or more domains of human functioning, operationalized as performing better than other individuals of the same age or experience, or as performing consistently at their personal best.

This definition is consistent with the literature on talent management in respect of potential talent recruits who must have partly innate basis (Meyers et al., 2013), aptitude and suitable intellect (Morin, 2007) and, above all, the ability to develop, acquire and perfect their skills in their particular field and within the positions they hold (Morin, 2010). In this regard, this chapter found green absorptive capacity and green adaptive capacity to be two necessary skills for the systematic development of pro-environmental potential recruits and talents towards an organisational focus on environmental sustainability goals. Therefore, an employer's search for ecological value fit must be based, first, on well-designed green recruitment practices in order to identify pro-environmental talents showing pro-environmental attitudes that are compatible with the organisation's ecological value (Chapter 1) and a natural tendency to behave pro-environmentally in a consistent manner. Second, it must involve green selection to test applicants' green absorptive capacity and green adaptive capacity. Both of which are to convey the organisation's distinctive ecological value. Meanwhile, green integrative candidate attraction practices should be designed on the one hand to activate and verify applicants' environmental identity, providing support for green selection (Chapter 1), and on the other hand to maintain job pursuit behaviour and ensure trust in the employer's ecological value and orientation. Additionally, when seeking to detect the right type of pro-environmental talents (Chapter 3), green candidate selection can be conducted in a tactical manner (Chapter 1) by delivering at the same time different pro-environmental types within optimal heterogeneity of green organisational distinctiveness discussed in this chapter for applicants to self-classify (self-define) with their judgemental confidence in a GRS. All these pro-environmental practices were demonstrated in this thesis to fall within the framework of the « Handicap » principle built on the employer's underlying pro-environmental qualities, excluding excessive manner (far right or extremism), preventing both non-conforming behaviours of recruiters and inflating self-presentation of participants (Cable and Kay, 2012). All in all, the green organisational capacity to attract is derived from green organisational processes that encompass green organisational distinctiveness. In this preparation for pro-environmental candidate attraction, a company can always perform pro-actively in conforming to the « Handicap » principle so that their recruiters will behave and react naturally and line with their green organisational distinctiveness in a context of green

organisational identity. Furthermore, since acting in this way at work shapes their daily pro-environmental habits, which automatically attract the fit pro-environmental potentials without imposing any costs or requiring extra efforts on the part of the recruiters, this finding is a valuable contribution to signalling theory as regards signal honesty.

To conclude, this chapter sheds light on the stabilized environmental movement of organisational ecological value established through green organisational routines to ensure consistent green organisational memory. As a result, future targeted pro-environmental talents can rely on present organisational CEP information, which they are able to access in the present directly by themselves or indirectly through their peers to assess, at some point in the future, the consistency of an employer's pro-environmental behaviours. Importantly, OAE will be found by pro-environmental talents among the company's environmental knowledge accumulated through green organisational routines. Because OAE is conditioned by the « Handicap » principle to build judgemental confidence in pro-environmental talents, the organisational green capacity to attract is to be managed accordingly during an organisational life cycle. Based on this rationale, this chapter pro-actively approaches pro-environmental candidate attraction through the combined effect of the green organisational process and the green organisational distinctiveness of the « Handicap » principle. Job seekers can perceive the honesty of CEP signals through both the costly character and hard-to-fake character of organisational pro-environmental behaviours. The costly character is found in the employer's environmental knowledge, while the hard-to-fake character is in their manner of doing. Importantly, the former is achieved through the reproduction of green organisational routines even in the event of difficulties, while the latter carries the organisational ecological value of optimal distinctiveness heterogeneity.

The contribution of this chapter is twofold. First, the chapter revealed the micro-process of environmental movement to highlight what can actually be a hard-to-fake signal in the context of a corporate green mission that people can trust, thereby answering the third research question. Second, this chapter clarifies the distinction between organisational green capacity to attract and green candidate attraction in order to define the framework of a green

organisational process of multiple episodes that are attributes of organisational trustworthiness, the most difficult job in a GRS. Ultimately, practitioners are able to figure out how a green organisational process can entail green organisational distinctiveness, which together constitute an organisational “hard-to-fake” .

THESIS CONCLUSION AND BEYOND

This thesis explores a key principle and practices for managing GRS, which is pivotal in recruiting, detecting and selecting the right type of pro-environmental individuals who fit with organisational ecological value in stabilized environmental movement towards an eco-living future of clean, safe and healthy. In summary, the findings throughout Chapter 1 to 5 are all attributes to a workable model of pro-environmental signalling about CEP being conditioned by the « Handicap » principle. However, an implication of signalling theory is that the model can be falsified by using the same principle in a different way. This leads to further research on hard-to-fake pro-environmental signal which was found in Chapter 6 to be hardly to falsify and inimitable organisational manner of doing. The value of this green organisational distinctiveness is the sufficiency which is not at below standard and not at extremism. Likewise, Chapter 6 addressed key research questions on know-how by highlighting green organisational routine for environmental knowledge creation and protection. This supports the notion that every organisation can become knowledge-intensive (Schreyögg and Geiger, 2007) through the management of green organisational routines that promotes the coexistence of knowledge transfer and knowledge protection (Krylova et al., 2016) while addressing green distinctiveness heterogeneity for green duties.

An eco-friendly workplace is wellbeing as it protects both physical health and psychological health by its cleanness and greenness. This thesis demonstrated that CEP, at both strategic and operational levels, appears to play a key role in every organisational function in safeguarding that wellbeing. At a high-order, green reward system in its tradition meaning (Herzberg, 1966; Porter and Lawler, 1968) can bring both financial (tax incentives, bonus or gainsharing) and nonfinancial (intrinsic or extrinsic rewards of nonmonetary sense) benefits and compensation to all. In this respect, contemporary literature on GHRM has tested and succeeded in proving this effectiveness of green reward practices for employee contributions on environmental performance (e.g. Zibarras and Coan, 2015; Chaudhary, 2019; Lasrado and Zakaria, 2019; Peng and Lee, 2019; Saeed et al., 2019). In brief, having demonstrated that while doing business in an environmental oriented direction is a high virtue

and helps to ensure a good quality of life by improving social and economic performance, this thesis shows conclusively that such practices and principles are worth doing. Accordingly, the corporate ethics of green mission is to ensure the cleanliness, safety and healthiness of environmental movement of the organisations, reducing social inequality and preventing environmental crisis. For this focus environmental orientation, this thesis has some essential theoretical implications, managerial implications as well as research limitations and direction for future research.

Theoretical implications

- From the lens of knowledge-based theory, this thesis highlighted the importance of forging a pro-environmental workforce of talents who have intensive knowledge and experience in the field and share the same pro-environmental attitude with the organisation in terms of environmental orientation. The workforce determines the success of a company's environmental oriented business through voluntary engagement in CEP for the common good, by continuously improving and contributing their environmental knowledge to corporate green duties, and demonstrating tenacity and a commitment to protecting the environmental belief system (i.e. principles, practices and values). To build this environmental knowledge-intensive resource, a company can bring new environmentally responsible individuals to their organisation or enhance the environmental performance of existing employees (Dilchert and Klein, 2018), meaning, external green recruitment and internal green recruitment, respectively.
- From the lens of signalling theory, the interplay of organisational honesty and consistency displaying a distinct organisational ecological value is the key to automatically recruiting the fit pro-environmental talents. Pro-environmental attracting these potential valued pro-environmental employees can always be implemented now by consistent green organisational routine to form pro-environmental organisational habit which can be recognizable and perceived as a hard-to-fake signal.

Managerial implications

- There is no one best practice of pro-environmental attraction in green recruitment. Rather, it is the equifinality of the green organisational process and the ongoing work on green organisational identity that necessarily express the organisational ecological value, so that the firm's ecological characteristics are perceivable and understandable (e.g. by express firmly green keywords and key green concepts). Given the ambiguity of signals, to make a pro-environmental message readable to the targeted individuals, an employer can plan the frequency of nonautomatic pro-environmental attraction practices based on systematic processing. To do so, there are two associated green strategies. First, the recruiter locates specifically targeted pro-environmental individuals and then organizing and bringing CEP practices to their attention. Second, the recruiter delivers signals about CEP in a sufficient manner (e.g. fixed concepts in online news, recruitment message, pro-environmental activities in the community, initial interview and selection test) and differentiates them in a cumulative-effect approach. Accordingly, reverse question and reflexive question can be applied in interviews and selection tests in order to make revealed their true environmental belief system.
- In the last round, the recruiter can clearly communicate and exchange more information by environmental facts and statistics relating to the green reward programme and the company's environmental orientation in an open and comfortable communication with the candidates, so that potential recruits can trust the employer's true ecological value as they envision the green benefits with the organisation (Renaud, Morin and Fray, 2016). This finding is consistent with the classical literature on recruitment as regards the motivator of verifiable inducements with calculable pecuniary value (Rynes and Barber, 1990). Likewise, if the candidate's ecological need is revealed in previous rounds, the recruiter can, in order to retain the selected applicant, signal about their green organisational capacity to meet the need which prevails over other impact factors related to job acceptance.

- To maintain the underlying organisational quality, which is costly to imitate, the employer should “walk the talk” on environmental orientation and behave pro-environmentally in a consistent manner that reflects their environmental belief system in every interaction with the pro-environmental job seekers, including current and future employees. In so doing, pro-environmental recruiters/interviewers can demonstrate their green organisational distinctiveness and constitute an organisational « hard-to-fake ».

Research limitations and directions for future research

- As previously noted, one limitation of signalling theory is that false and misleading signals proliferate until the receiver learns to ignore them (Connelly, et al., 2011). In this regard, this thesis has made a remarkable contribution on hard-to-fake pro-environmental signal, namely the green organisational distinctiveness embedded in a setting of green organisational identity. One example is the eco-design of a green recruitment message according to optimal heterogeneity of green organisational distinctiveness on a job portal. However, if similar or imitating signals are delivered at the same time by competitors in an « arms race » , it will be difficult to make the targeted infer about the focal company’s trustworthiness, especially for candidates to whom the company is not familiar. There is evidence in the literature supporting the positive effect of participants’ perceived familiarity, perceived similarity, perceived ideology, and self-identification with the group/organisation. In this respect, the empirical investigation in this thesis revealed that perceived true action is one important facilitator. Future research is encouraged to investigate the effect of green organisational routine (Chapter 6) and the disillusionment strategies used by employers. Some possible strategies are countering the marginalization of false and misleading signals, altering the proliferation of such signals before too long, and counterfactual statement.
- My empirical study did not take into account the effect of different kinds of signals. Generally speaking, seeing is deceiving, and seeing is believing. These are possibly linked to bias which is not really of negative meaning. An image cannot convey the

reality (Merriam and Tisdell, 2016). Therefore, future study can leverage eco-minded job seekers' perceptions and preferences towards various kinds of eco-signals, including image, artifact, and keywords in web-based green recruitment messages as well as the optimal method of displaying eco-signals to induce positive inferences about signal honesty.

- The empirical investigation observed individual transitions in perceptions in both positivity and negativity tendencies but did not take into account individual differences. To facilitate the detection of person-organisation fit on ecological value, further research is recommended on these within-individual factors (e.g. pro-environmental attitude, green personality traits, environmental knowledge, personal desirability bias and prejudice) to examine job seeker's preferences for various types of environmental oriented companies or industries. Additionally, a research question would be how important the ecological value fit is to job seekers in their job orientation. In addition, how does individuals' green adaptive capacity intervene in this relationship?
- Given the popularity of e-recruitment (the also called online recruitment), future research can also examine the correlation between individual's technological adaptability, perceived e-complicatedness, familiarity with electronic devices and information tracing behaviour, and job pursuit behaviour.

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ANNEX 1: Invitation Email to Potential Participants

From: do-dieu-thu.pham.1@ulaval.ca
To: [Email of recipient]
Subject: Searching participants for a pro-environmental study



UNIVERSITÉ
LAVAL Faculté des
sciences de
l'administration

*Are you keen on promoting your interest for environmental sustainability?
Are you going soon to the job market?
Don't you think you could protect the Vietnamese natural environment through your work?*

Dear [name of recipient and title],

We are looking for participants for a focus group discussion on a given pro-environmental matter being held in [city/province], Vietnam. This study is ethically certificated by Cerul* and is within the framework of our research project titled:

“Managing green recruitment to attract pro-environmental job seekers”

An honorarium equivalent to **500,000.00VND** and a souvenir from **Laval University**, Canada is offered to each participant / Focus group of **two-hour** duration

Criteria for selection:



- Vietnamese last-year university students OR MBA students
- Have a sensitivity to environmental sustainability
- Be a good listener and have good presentation skills
- Have an availability matching with other participants' during April and May 2019

The information provided by the participants is treated confidentially and the data is protected. Should you wish to join this study, please fill in the enclosed form of CV and send it back by replying this email.

The researcher will contact you shortly afterwards. Please be so kind and understand that the number of participants for discussion is limited at a maximum of five and that a short interview (online or face-to-face) may be applied.

All the participants need to do is bringing their interest for environmental sustainability, joining our discussion and sharing their real opinions. We will have a cup of tea and together make a small, but worthwhile contribution. Your participation will help develop our research project and have a potential in promoting green recruitment at an enterprise. I would be pleased to provide further information in the interview upon the receipt of your application.

Thank you very much in advance for your interest and your quick application.

Kind regards,
Pham Do Dieu Thu (Ms.)
Researcher–PhD candidate in Management
Faculty of Business Administration
Laval University, Quebec, Canada
Email: do-dieu-thu.pham.1@ulaval.ca

* Cerul – ULaval Committee of ethics for researches in human

ANNEX 2: Focus Group Individual Questionnaire per Context

DATE: ... May 2019

NAME:

Please circle the answer that best suits yourself for each of the below questions:

Q1: The company's environment-related information that I know before this meeting is interesting

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q2: The environment-related information in the company's web pages is recognisable

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q3: The company's environment-related information is attractive

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q4: I would feel proud to be employee of this company

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q5: I agree with the ecological values that this company is promoting for the environment

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q6: I think this company has pro-environmental rewards to its employees

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q7: In overall, I think this company is environmentally attractive

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q8: The company's pro-environmental information is honest

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q9: Those pro-environmental signals are consistent with each other

1 = strongly disagree 2 = disagree 3 = slightly disagree
4 = undecided 5 = slightly agree 6 = agree 7 = strongly agree

Q10: In overall, I feel satisfied with the company's pro-environmental behaviours

1 = strongly unsatisfied 2 = unsatisfied 3 = slightly unsatisfied
4 = undecided 5 = slightly satisfied 6 = satisfied 7 = strongly satisfied

(Note: The above is the questionnaire for session 1, each student-participant is invited to give ratings again in session 2 and session 3 for statements Q3 to Q10)