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A SPECIAL ISSUE ON

PEOPLE IN ORGANIZATION: INVESTIGATIONS OF ENVIRONMENTAL FACTORS IN ORGANIZATIONAL BEHAVIOUR (SIBRM7)

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EDITORIAL PREFACE

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Miss Michelle Yit
(Institute Technology Bandung, Indonesia)

This Special Issue collates studies conducted in the area of Organizational Behavior; comprising of critical reviews, surveys, interviews, data analysis, and provide recommendations for long established organizations and/or organizations that expanded overseas to keep abreast with organizational changes that took place over time and to have appreciation of cultural differences. It primarily carries practical insights and suggestions from people at work to people at work to make effective changes in aspects of hiring and engaging employees, rewards program and understanding aspects of employee well-being.

For organizations to be successful, one of the key assets is their people – managers, senior and junior employees. Leading organizations recognized the need for trust, cultural control and expertise at all levels instead of extensive and cumbersome rules and regulations inherent in hierarchical control (Dess et al, 2016). Fadal (2004) quoted 'we are judged by how we handle each other, not by how smart we are'. Organizations need to stay abreast of the changes in their employees' behavior based on their culture, age and background and employees' intellectual potential should be noticed and used (Ciernak-Emerych and Piwowar-Sulej, 2017).

Employees should know about the goals of the business and how key value-creating activities in the organization are related (Dess et al, 2016). Reinforced individuals are responsible, take initiatives and make decisions to solve problems, thus improve service and performance (Lakshinarasimha, 2017). Often organizations managed their leaders well but overlook their bottom rung staff, or vice versa (Fadal, 2004). Therefore, followership deserves equal attention as leadership and a fresh review is required (Sy, 2010).

Another upcoming challenge is managing of Generation-Y employees. Gen-Y will form majority of employees worldwide by 2020 (Chumba & Gachunga, 2016). Organizations need to arm themselves with knowledge about Gen-Y, such as, what factors impact Gen-Y engagement level (Bolton et al, 2013); and how they differ from other generations cohorts in the workplace (Glass, 2007). At the same time, the well-being and recovery process after workday should not be undermined and could be affected when there is poor psychological detachment because employees may have difficulty to recharge at the end of the day (Geurts & Sonnentag, 2006; Eden, 2001).

Job applicants are geographically dispersed where physical interviews are not possible. Technology based interviews have to be used; however; there are uncertainties to know applicants' reactions as culture will play a role in moderating applicants' reactions towards technology-based interviews (O Connor et. Al., 2008). The applicants' reactions to fairness and favorability, depending on culture background, may affect behavioral outcomes such as intentions, withdrawal and perceived performance.

For organizations that expanded overseas, usually from a developed country to a less developed country (for example a collectivist country), with reasons of lowering production costing and increasing productivity. Transfer of knowledge becomes critical. The constructs of individualism and collectivism have been expanded to dimensions of vertical and horizontal for in-depth studies (Cozma, 2011). In a collectivist society, there is a high preference for a strongly defined social framework in which individuals are expected to conform to the ideals in-groups to which they belong (Hofstede Insight, 2018). Organization challenges would surface from the need to change to the country's culture working environment; and changing incentive programs to be effective

and relevant to local culture in order to attract and retain good employees, and provide sound career development.

Learning of skills, knowledge and task related experience is a prerequisite of growth and important to adapt quickly to external changes (Fadal, 2004). In addition, employees who are equipped with knowledge and skills promote self-confidence, create motivation to preserve competence, and have continuous improvement in mind (Saray et al, 2017). Parallelly, knowledge within an organization helps with equipping of employees. Training and development are human resources initiatives that contribute to Knowledge Management implementation and processes (Chen & Huang, 2009). This forms the key thinking for long established organizations to re-chart or re-organize within themselves to increase human capital.

The papers in this special topic investigate the impact of environmental factors in organizational behaviour and begins with 'Implicit Followership Theories in Organizational Settings and the Need to Account for Environmental Factors' by Ms Lee Pui Yee. Linked to follower's job satisfaction, performance, leader liking and leader-follower relationships, this paper outlines a critical review of the environmental and contextual factors of followership and cultural differences of nations. The next paper is written by Ms Goh Ee Leng entitled 'Applicant Reactions towards Asynchronous Video Interviews in Predicting Behavioural Outcomes: The Role of Culture as a Moderator'. The paper research is about technology-based recruitment using asynchronous video interview to study applicants' reactions towards fairness and favourability, effects of culture and behaviour outcomes e.g., withdrawal intentions and perceived procedure performance.

The third and fifth paper are co-authored with Mr Milind Gadre on 'Team Based Gainsharing Program Implementation in a Polycarbonate Lens Factory Indonesia' which is a 6-year study of team-based gainsharing program in an eye lens manufacturing in Indonesia. The results proved successful where the gainsharing program helped the company achieved their performance goals, and also because some positive changes was done by the company management during the study. The other paper is 'A Historical Approach on Individual Incentive Program in a Collectivist Society in an Indonesian Glass Lens Manufacturing'. Though this paper's data is 2 decades ago, it draws policies that's relevant today in context of individualism-collectivism as the study brought to light about public recognition while employee incentives continue to be disbursed. The fourth paper was co-authored with Mr Muharam Zamzam and Mr. Hidajat Jann T about the 'Status of Knowledge Management in a Professional Services Firm to Address Turnaround Time and Quality of Service'. Weidner (2018) quoted the new centre of knowledge management is people, and not technology. Thus, this paper finds relevance in this special topic and confirms that one of the benefits of training and development is successful implementation of knowledge management.

The second last paper 'A Critical Study of Workplace Factors Determining the Engagement of Generation Y Employees' was written by Mr Henry Drieberg, Mr. Jarreth Yeo, Mr. Lee Kar Fai and Ms. Shalini Selvam, which explored would intrinsic values (job fulfillment, career advancement), extrinsic values (monetary benefits), altruistic values (sustainable social responsibility) and social rewards effectively engage the Generation Y employees in a multiple regression analysis of 523-strong survey in Malaysia. Last but not least, Ms Laura Lai wrote about 'Work Segmentation, Psychological Detachment, and Burnout: The Moderating Role of Work-Related Communication Technology Use During Leisure Hours'. This paper surveyed the employee well-being in terms of work-home segmentation mediated by communications technology in 224 participants. Findings on work-home segmentation preferences and norms were discussed. In addition to employee well-being as it determines burnout levels in employees, though the study was conducted pre-Covid-19, it was compared in current Covid-19 setting. This is so as to implement organizational policies that achieve successful boundary control and psychological detachment.

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Implicit Followership Theories In Organisational Settings and The Need to Account for Environmental Factors

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Abstract

The introduction of implicit theories into organisational studies have beckoned renewed interest in the field of leadership and followership. Implicit Followership Theories (IFTs) in particular have been linked to follower job satisfaction, performance, leader liking and leader-follower relationships. Though the study of IFTs is relatively new, it seems to be trailing behind as compared to its counterpart, Implicit Leadership Theories (ILTs). This paper therefore aims to review and critique the research that has been conducted thus far on IFTs that are relevant to organisational studies, highlighting the gaps in the field that calls for fulfilling in pursuance of IFTs prominence in organisational studies. More specifically, we draw insight from focusing on environmental and contextual factors as a compelling antecedent towards the determination of IFTs. From this research, we have discovered that while this point of view is not unfamiliar, it has remained as a secondary focal point to other factors. Variations between varying environments brought by the cultural difference of nations were observed in literature where independent studies were conducted yet overlooked as a consequence of experimentation. Results obtained therefore prove a demand for explicit and extensive studies to observe the diversity of IFTs from different environmental and cultural backgrounds.

Keywords: Implicit Followership Theories (IFTs), Followership, Organisational Behaviour, Implicit Leadership Theories (ILTs), Leadership.

1. INTRODUCTION

In the last few decades, leadership studies have gained vast recognition as the answer to organisational success thus having extensive amounts of studies conducted on this research field. On the other hand, followership has been neglected as a determining factor for organisational success as they are commonly associated with submissive behaviour; though followership development has started to gain traction in the field of organisational literature, inspiring various studies that have transformed into notable theories today. It is certain that leadership does affect organisational performance but it is important to note how leaders are nothing without their followers. In fact, Kelley (1992) has famously claimed that follower task completion accounts for a significant contribution of 80% towards organisational performance as compared to their leaders.

Many studies have sought insight from individual traits and factors to stipulate on leadership and followership characteristics, yet implicit theories have beckoned renewed interest in leadership studies as it draws insight from the cognitive perceptions of individuals based on their understanding and experience. ILTs have been heavily researched for more than 40 years since its inception by Eden and Leviatan (1975). Consequently, the inferior counterpart namely, Implicit Followership Theories (IFTs) was only conceived in the last 20 years with scant research and wide gaps to yet be filled howbeit with promising prospects owing to a spike of papers released from 2013 (Guo, 2018). The field of IFTs and ILTs have shown promising results as the universal

applicability of their frameworks that provide specificity in various aspects allows for copious expansive research in multiple directions. Implicit theories are unique in such a way that in the case of IFTs, draws information from the perceptions of individuals in the position of either leader or follower on followership traits (that may not necessarily reflect reality) and their effects on organisational outcomes including work performance, job satisfaction and reliability (Epitropaki et al., 2013). Studies conducted thus far has inferenced on various antecedents of IFTs amounting to large strides in their theoretical development. As cognitive perceptions are a cultivation of various interactions experienced over time, variation arising from different environmental factors take precedent. Most prominently, cultural differences have been proven to differ in IFT composition but such notions have been continuously overlooked as the main factor to be investigated.

As of such, this paper aims to draw focus on IFTs as an avenue to improve both leadership in the form of understanding how leader's view followers and their consequential relationships that stem from it as well as followership through the understanding of how followers view followership and how leadership may affect it. By doing so, this study aims to draw insight on reasons and criticisms as to why the topic of followership in the field of Organization and Management Theory (OMT) (Cristofaro et al., 2020) has been and still continues to be relatively neglected thorough analysis of available literature which has yet to be done. In that event, we put forth the notion to focus on the environmental and contextual factors that come into play in influencing IFTs where previously neglected for the most part.

2. BACKGROUND

The recognition of followership began with McGregor who theorized implicit theories and the effect of the follower's behaviour on the leader's ability to effectively manage his team in theory Y. However, it was only later that followership became an established body of knowledge with Robert Kelley (1992) who insinuated on the ability for followers to cultivate constructive criticisms through independent critical thinking, all the while shunning the blind sheep follower stereotype. In addition to that, exemplary followers were stipulated to possess strong team dynamics as well as effective engagement in making decisions by Kellerman (2008). While the aforementioned authors focused on traits and attributes, an alternate view was proposed by Chaleff (1995) who drew insight from a behavioural point of view, citing two critical dimensions to be considered namely, the degree to which they support their leaders, and the degree of challenge followers inflict on their leaders regarding their behaviour or role.

It has become fundamental in human beings to categorise the stimuli from their surroundings based off perceptions, giving rise to social cognition literature that elaborates on the human tendency to classify others in work environments as leader or followers (Engle & Lord, 1997). Implicit theories therefore refer to the "lay" or "naïve" theories that are present within typical everyday individuals as supposed to formally structured theories by academicians supported by rigorous research and analysis (Rosenberg & Jones, 1972).

Implicit Followership Theories stems from ILTs which was developed by Lord and associates that sprung from the notion that individuals in an organisational setting tend to make assumptions regarding the traits and behaviours that constitute an effective leader through previous experiences and socialisation processes with leaders (Lord, Foti & De Vader, 1984). The cognitive structures and perceptions thus form perceptions that drive follower's expectations and reactions pertaining to management when in a professional work space. In early literature, ILTs were exclusively analysed though in recent years, many have started to shed light on the followers' perspective (IFTs) with respect to how leaders perceive their followers as they are and how they should be, to shed light on the cognitive aspects affecting their leadership through leader-member exchange (LMX).

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Thomas Sy (2010) defined IFTs as 'individuals' personal assumptions regarding the traits and behaviours that characterise followers. More specifically, what follower schemas are held by followers and/or by leaders, analysed to inference on how individuals would decide, behave and react to followers (Avolio, Walumbwa & Weber, 2009). While many have focused on leader's IFTs (meaning a leader's assumptions of a follower), it is important to note that the field also includes the follower's assumptions of their own characteristics and behaviours (Sy, 2010). Research has shown that follower schemas or prototypes can also defer between leaders as a study successfully demonstrated the difference between transactional and transformational leaders (Wofford & Goodwin, 1994) displaying vast areas for future research.

The implicit aspect of IFTs reflect the implicit processes at the cognitive level where perceptions are based off associations formed as they continuously identify and internalise stimuli through interactions throughout their lifetime which strengthen and eventually become automatic. Consequently, implicit processes are considered to be outside one's awareness commonly associated with impulsiveness and lack of control and therefore do not involve the observed behaviour of an individual but rather the impressions of leadership and followership (Tram-Quon, 2013). IFTs form within individuals at early stages of life through a series of socialisation processes that would develop and evolve over time as they proceed to experience more interactions with followers (Lord & Maher, 1993). Individual perceptions may therefore not reflect reality as these prototypes are formed through a process adopted to their own social experience, through a compilation of leader-follower interactions amounting to a followership prototype that exists in their personal memory (Guo, 2018).

Categorisation theory stipulates that stimulus absorbed are compared to an individual's schema within to allow for them to obtain a better understanding of the stimulus (Lord and Maher, 1993). The prototyping process thus allows for identification of potential group members commonly described as a pattern-matching process where social target characteristics or behaviours are paired with a pattern (prototype). This amounts to a category definition by the individual resulting in a sub-classification of a particular category as well as a 'pattern-completion process through which unobserved but prototypical traits and behaviours are also associated with the categorised individual' (Shondrick, Dinh, and Lord 2010) termed as recognition-based processing. Taking the followers into context of the categorisation process, the process evolves into "Recognition-Based Follower Categorisation Theory", put forth by Shondrick and Lord (2010). By doing so, IFT prototypes are therefore influential in leader-follower context as leaders would benchmark their followers, judge and respond accordingly.

Various organisational factors that affect employees (followers) including promotion decisions, bonuses, and performance are often influenced by employee ratings. Therefore, IFTs poses as a methodological method to tap into the rater's mind as studies have displayed a 62% in variation in appraisals that are attributed to implicit person theories (Atkins and Wood, 2006) rather than the actual behaviour of the individual in question. Additionally, followers have been demonstrated to strive towards fulfilling the prototype that their leaders have of them (Eden, 1992) thus leadership can be thought to be the process of shaping and transforming their followers to increase overall performance (Lord and Brown, 2004).

3. METHODOLOGY

The purpose of this study is to critically review the available literature on to IFTs pertaining to the body of management studies to highlight the gaps in knowledge. Information shall be gathered via the Queen Mary University of London library using a search string of key words such as "implicit followership theories" in management journals for the majority of paper except where relevant. The analysis would begin with the gathering of existing theoretical models available to frame the information gathered. IFTs would then be analysed with respect to individual prototypes that have been discovered thus far which would be reviewed explicitly from both the leader and

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follower perspective and their relationships. Additionally, the methodologies used to examine and categorise IFTs would be investigated with respect to direct and indirect methods.

Through preliminary research the following environmental factors have been identified and shall be critically discussed within the confines of this paper which includes: parental figures, organisational background, age and gender discrimination, and cultural differences. As the IFT techniques provides flexibility in forming various prototypes suitable to the designated environment, this paper seeks to delve into studies performed on varying nations where only the most significant prototypes would be included due to the constraints of length. The interplay between the discussed factors would be touched on as well.

The strengths and pitfalls of IFTs would then be critiqued and discrepancies would be brought forward. Finally, suggestions and recommendations for future research and possibilities shall be made according to the results of outcome.

4. THE CURRENT STUDY
While the introduction of IFTs to the realm of organisational literature has renewed the interest of scholars, as Junker and Van Dick (2014) discovered, there is no study to date that demonstrates effective prototypes that are directly contributory in predicting organisational performance, highlighting the lack of supporting data regarding the true usefulness of utilising IFTs for performance enhancement. Though many have speculated on the benefits of understanding the implicit prototypes that are prevalent in leaders and followers, the field is still too premature to provide any substantial and directly applicable framework or processes to grow and expand as a notable field of organisational theory. Many have put out claims stating the significance of their work and how beneficial the results could be, albeit only if expansive research is conducted on it. Therefore, this paper aims to critically discuss the factors that have hindered the widespread adoption of IFTs.

4.1 Theories
Social categorisation theory has garnered the most attention when discussing implicit theories being the earliest of theoretical models, which states that followers are categorised through a recognition-based process followed by a pattern-completion process which involves individuals making assumptions based off their individual cognitive IFTs (Shondrick, Dinh, & Lord, 2010). In kind, individuals are able to effectively respond to situations of limited information through the use of pre-existing schemas thereby reducing the use of information processing resources to a satisfactory level (Epitropaki et al., 2013). According to the categorisation model, cognitive structures are cultivated through socialisation processes overtime, which are then used in the matching process. In the situation of receiving favourable or unfavourable treatment, the recipient responds accordingly thereby solidifying the actor's beliefs (Chen & Bargh, 1997). The evaluation method has therefore received the most attention and recognition, contributing to its extensive use throughout the field, strongly supported by the cultivation and widespread use of prototypes in the study of IFTs as a practical model for processing information.

Prototyping has provided a foundation for the study of IFTs, critical to regulate and organise the field from an early stage; defined as 'abstract composites of the most representative member or the most commonly shared attributes of a particular category' otherwise known as cognitive structures (Epitropaki and Martin, 2004) that can vary between individuals. More specifically, prototypes can be categorised under two dimensions namely, norm and valance of prototypes. The norm of prototype involves two categories that is 'ideal' which involves idealistic traits that would constitute the best possible individual, and 'typical' which represents the more realistic and usual traits observed by followers/leaders. On the other hand, the valence of prototypes entails the positive and negative prototypes which involves the effective or unfavourable traits respectively. It is important to note that 'positive' and 'prototypic' as well as 'negative' and 'anti-

prototypic' may be used interchangeably as several authors have (Sy, 2010). Junker and Van Dick (2014) introduced another category involving neutral attributes to both dimensions which do not add value to the categorisation, all the while claiming that research has fallen short in measuring and analysing the effects of the negative prototypes. According to Sy, the supporting factors of IFTs consist of enthusiasm, industry and good citizenship (prototypical) as well as insubordination, conformity and incompetence (anti-prototypical) (2010) and was tested to be applicable on all hierarchical levels, job scopes, and span of control (Epitropaki et al., 2013).

Recent perspectives have attempted to decipher the complexity of the leader-follower relationship such that they are dynamic in state, according to the connectionist model (Hanges et al., 2000, Lord and Shondrick, 2011). The introduction of said model comes as an extension to the categorisation theory, delving deeper into the influences by focusing on the schema activation process. The process involves the combination of top-down constraints and bottom-up inputs which triggers multiple nodes of the prototype network thus allowing the perspective of viewing IFTs as well as ILTs in a non-static manner as changes could take place from an organisational, relational or individual standpoint (Foti et al., 2017). Connectionist networks can be described as a continuous integration of information through networks of processing units which produces a conclusive response in the form of activation or inhibition through output units (Lord et al., 2001). Perceptions of followership may therefore be context specific and fluid while maintaining a coherent and considerable consistency (Foti, Knee & Backert, 2008, Sy, 2010) rather than to be locked in time and space.

Falling under the connectionist model, attachment theory facilitates a deeper understanding of implicit theories and how they may operate as it provides an empirically based model to investigate the relationship between the nature of interactions of an adolescent with their primary caregiver and their cognitive representation of others in an organisational setting as they mature (Mikulincer & Shaver, 2016). Schema transference acts as a fundamental principle in the attachment theory as the authors propose that existing cognitive representations of individuals in a particular interaction is brought forward to new interactions as well (Andersen and Cole, 1990). However, studies investigating attachment style as an antecedent of IFTs specifically are lacking as compared to that of ILTs. That has changed recently with the exploratory study on leaders' attachment style influence on IFTs (Thompson, Glaso & Matthiesen, 2018). A proposition was therefore brought forward that both avoidant and anxious attachment styles is positively correlated with negative IFTs (more so in avoidant leaders) indicating that leaders that are more securely attached have tendencies to hold more favourable IFTs. The study also supported the influence of early life experiences in forming IFTs.

While not directly referencing IFTs, McGregor's (1960) theory is worth mentioning as one of the earliest theories to highlight followership behaviours and the effects of leadership perceptions on employees. The theory dictates a rather oversimplified outlook on employee behaviour involving Theory X which denotes a highly pessimistic view on employees' perception towards work, prioritising physiological needs and safety needs. On the other hand, Theory Y exhibits a more optimistic perception on employee behaviour that is driven by social, esteem and self-actualization needs. The simplified framework has paved the way for copious studies solidifying its relevance in the realm of followership, still retaining its relevance 60 years after its inception. However, McGregor faced ample criticism stating that the theory was never tested prior to publishing and that while useful for a basic explanation of behavioural traits, in practice would be doomed for failure; especially in today's reality where work-life balance has become a growing priority, certain factors may no longer be suitable to categorise ideal followership traits.

4.2 Dual Perspectives: Leaders' and Followers' IFTs
Through a simple manipulation of leaders' performance expectations has been proven to affect their followers' behaviours in such a way that positive manipulation has led to improvements in follower performance known as the Pygmalion effect (Eden, 1992) and a negative manipulation

has led to decrease in follower performance known as the Golem effect (Leung & Sy, 2018). The Pygmalion effect, a self-prophecy has been well substantiated. However, results obtained were a result of forced manipulation of said leaders' expectations, negating the true phenomena of naturally occurring expectations in organisational settings that routinely occur. Nonetheless, through the emergence of IFTs, studies on expectation effects in organisations have fallen under the category of leaders' IFTs being a key driver of the Pygmalion effect.

Leaders' IFTs refer to the leaders' perception of follower prototypes which can draw insight on their individual management style LMX as well as their attitude towards employees and their performance expectations. Duong's (2011) research has further informed that positive leaders' followership prototypes promote transformational leadership. Various research has articulated that leaders' IFTs are correlated with LMX, followers' leader preference (Sy, 2010), performance fulfilment (Whiteley, Sy and Johnson, 2012), work satisfaction, organisational commitment, work behaviours and organisational citizenship behaviour (Duong, 2011). In theory, leaders who possess more positive IFTs should have followers with generally better outcomes which is in line with the Theory X and Theory Y developed by McGregor (1960). The LMX and their overall relationship can be thought to be influenced by the prototypical match between the leader and follower meaning that a leader who perceives their followers to be enthusiastic and reliable would have a better relationship or higher LMX with followers who demonstrate these traits as compared to those who do not (Kedharnath, 2011).

Followers' IFTs are the followers' perception of follower prototypes which elaborates on their work behaviours and attitudes as a subordinate in an organisational setting (Lord et al., 1984). While leaders' IFTs draws on how they treat their followers, followers' IFTs elaborates on an individual's followership behaviour (Guo, 2018). This is due to the fact that as an organisation evolves over time, followers who also persist over time tend to fabricate the status quo of the follower modality within the organisation. In fact, Carsten et al. (2010) discussed the implicit follower prototypes influence on followers' attitudes and behaviours in an organisational setting. The study revealed the effects of passive and active followership prototypes as individuals who possess the latter are more proactive in their work, responsible, provide positive feedback to motivate leaders and also challenge their leader's decisions. Individuals who possess the passive prototypes on the other hand are lacking in motivation and responsibility as they prefer to be instructed by others. Additionally, the nature of the organisation and the work that is required within influences the prevalence of passive or active followers where more turbulent and dynamic businesses tend to contain more active followers and follower prototypes as compared to a stable and stagnating business.

4.3 Measurement Methods in the field
Direct measurement methods are often utilised within the field due to the simplicity and efficiency that is associated with the method. Particularly when observing implicit theories however, indirect measures may be more representative of the situation as they are designed to avert the conscious levels of information processing in line with the 'implicit' nature of IFTs. Practically speaking, direct measures still greatly outweigh the speculated associated inaccuracies therefore being used to gather preliminary information that would then be tested in-depth and expanded through indirect measures. Contrarily, studies have shown in several situations, neither measure is more dominant in predicting outcomes of behaviours (Epitropaki et al., 2013).

4.3.1 Direct Measurement Method
The Trait List by Thomas Sy (2010) revealed a 6-factor model of IFTs which involved 'conformity', 'insubordination', 'incompetence', 'industry', 'enthusiasm' and 'good citizen' to represent the typical follower image. Sy further developed a method involving a second-order two-factor model taking loading the former 3 factors onto 'anti-prototypic follower' and the latter three onto the 'prototypic follower'. Their corresponding first-order factors reduced into 3 representing variables

according to their synonymic terms that have varying factor loadings (2010). Of which the individual typical followership prototypes are represented by 'industry' - hardworking, productive, and goes above and beyond; 'enthusiasm' - excited, outgoing, and happy; 'good citizen' - loyal, reliable, and team player. The anti-prototypic factors are represented by 'conformity' - easily influenced, follows trends, and soft spoken; 'insubordination' - arrogant, rude, and bad tempered; 'incompetence' - uneducated, slow, and inexperienced. The study revealed the positive correlation of prototypic followership with leader liking, job satisfaction, as well as leader-member exchange (2010) and that IFTs are stable over time from a contextual standpoint.

In another empirical study, Carsten et al. (2010) justified the structure, content and validity of IFTs while revealing that the traits pertaining to followers fall within a continuum of proactive to passive characteristics; of which ranging from obedient, deferent, flexible and low responsibility falling on the side of passive behaviours followed by sense of ownership, outspoken and teamwork completing the continuum with behaviours of proactive followership (Epitropaki et al., 2013). Though as the traits mentioned are highly similar to that of Sy's study.

Sy's method has brought tremendous insight to the field of IFT studies, equipping researchers alike with a tool for generalisation and comparability among the studies conducted thus far. However, Junker et al. (2016) challenged the industry with the Task & Relationship rubric stating the lack of prototypes that go beyond effective followers as well as the explicit measurement of counter-ideal prototypes thus developing an alternative method in response to those claims. Ideal followers are a depiction of individuals who are the most suitable in achieving a specific goal. Therefore, followers may be perceived to be ideal on the measure of effectiveness alone. On the contrary, this paper brought forward the notion of effectiveness simply being a subtype of a broader ideal prototype whilst introducing a second subtype involving characteristics of building good relationships in line with the notion made by Van Gils, Van Quaquebeke and Van Knippenberg (2009) that IFTs are only partially encompassed by effectiveness prototypes ergo unequitable with these broader theories. The conceptualisation of a distinct counter-ideal scale was out of necessity as while the average person may think otherwise, ideals and counter-ideals are not part of the same scale of opposite ends, supported by similar research conducted on ILTs (Junker et al., 2011).

As a result, an item set comprised of 21 attributes was conceived. The two previously mentioned subtypes were characterised as 'task' (abilities, motivation and enthusiasm attributable to task mastery) and 'relationship' (individuals' tendency to prioritise other's needs, teamwork and team communication) orientation. Similar to that of Sy's (2010) method that contains two orders to their scale, the attributes were loaded onto four dimensions namely, 'ideal relationship-orientation', 'ideal task-orientation', 'counter-ideal relationship-orientation' and 'counter-ideal task-orientation'. The higher order scale comprises of the former two dimensions loading onto 'ideal follower' while the latter two loaded onto 'counter-ideal follower'. The 21 attributes were segregated to fit the four-factor scale as follows: 'ideal relationship-orientation' – team-minded, communicative, and creative; 'ideal task-orientation' – educated, thinking ahead, intelligent, determined, assumes responsibility, engaged, interested, cooperative, and conscientious; 'counter-ideal relationship-orientation' – indifferent, irritable, malicious, uncooperative, rude, insubordinate, and aggressive; 'counter-ideal task-orientation' – passive and incompetent.

An alternative adaptation to the Theory X and Theory Y model is a scale by Kopelman et al. (2012) which focuses on 3 main positive attributes namely 'industrious', 'capable' and 'trustworthy', as well as 3 main negative attributes which are 'lazy', 'incapable' and 'untrustworthy'. These attributes are accompanied by 4 sub-attributes which indicate circumstantial perceptions towards work that vary in weightage to the scoring rubric. While this model makes the assumption that a positive follower is more self-driven, active and motivated which are congruent with other measures, the negative sub attributes highlight a more passive

perception towards work rather than malicious behaviour which have been more of the overall theme in other measures.

The discussion of ideal prototypes brings into question a whole other realm of possibilities due to the varying circumstances that arise from taking into account typical or ideal comparisons. It is such that when comparing followers with typical prototypes, deductions pertain to how comparable the follower would be against the average; whereas, when being compared to ideal prototypes, followers would be measured on how well they will perform against the best possible follower.

4.3.2 Indirect Measurement Method

Despite studies stating the lack of indifference between direct and indirect measures, the failure to incorporate indirect measures creates a divide between theory and methods when trying to predict implicit variables through conscious deduction such as self-reporting systems, possibly amounting to biased results. As such, Uhlmann et al., (2012) has developed a 'toolkit' for organisational field involving a functional taxonomy of implicit measures comprising of accessibility, association and interpretation-based measures.

Accessibility-based measures involve the degree of spontaneous activation of a target concept within an individuals' mind (Epitropaki et al., 2013). From the standpoint of IFTs, a priming method has been used to elicit positive IFTs in efforts to observe the influence on corresponding behaviours demonstrating the influence of positive IFTs on improved leader-follower relationship, performance, and liking (Sy, 2011; Whiteley, 2012).

Associated-based measures assess an individual's categorisation reaction to rapid stimuli to demonstrate the relations of multiple concepts to cognitive schemas. Of which Tram-Quon (2013) proposed the Single-target IAT as an indirect measure of IFTs through evaluating a person's associative evaluative association with followers' concepts and attributes along with the timeliness of said response. Though the author stated that the method requires improvements before it can be validly applicable in studies.

Theoretically speaking, indirect measures have promising possibilities for IFTs but to date have rarely prevailed in studies due to the difficulty and subjectivity in interpretation of indirect measures. Therefore, until new or improved methods are developed, the field have little choice but to continually adhere to the direct measures available.

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4.4 Outcomes

The cause and effect of IFTs have been discussed throughout though this section is aimed at discussing from the point of view of the end result, as supposed to the previous sections which analyse the front-end aspects. IFTs have been widely recognised as contributors to job satisfaction, LMX, and performance ratings to name a few.

The notion that leaders in general do not necessarily treat all subordinates equally gave rise to Leader-Member Exchange (LMX) theory where the interaction falls on a range from low to high (Graen & Uhl-Bien, 1995; Liden, Sparrowe, & Wayne, 1997); high LMX referring to good relationships built on mutual respect, trust, and support to name a few (Uhl-Bien, Graen, and Scandura, 2000) and low LMX are relationships of lower quality where the leader pays little attention and resources to the individual (Lai, Chow & Loi, 2016). The variation in interaction is

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due to time and resource constraints that pushes the leader to form a unique dyadic relationship between them and individual followers.

Few studies have highlighted IFTs influence on LMX including Sy (2010) who displayed the leaders' prototypical IFTs were positively linked to follower liking for leaders, relationship quality, and trust which are also negatively linked to anti-prototypic traits. On the other end, leaders' prototypical IFTs were also positively linked with leader outcomes of liking and relationship quality with their followers, like wise negatively linked to anti-prototypical leaders' IFTs. Junker et al. (2016) also provided similar results for ideal IFTs which related to higher LMX, performance ratings and organizational citizenship behaviour.

Early LMX research has hinged on the belief that relationships are experienced similarly by both parties yet meta-analysis has discovered a variation in ratings by leaders and followers on said relationship (Sin, Nahrgang, and Morgeson, 2009). Hence the focus grew on LMX agreement (and disagreements) which represents the similarity of follower and leader perceptions on quality of their LMX relationship where Van Gils, Van Quaquebeke, and Van Knippenberg (2009) presents a dyadic model which outlines and explains the LMX quality ratings by leaders' and followers' and why LMX disagreement may arise. Of which, the study revealed that the LMX quality is dependent on the perceptions held of the other parties contribution as well as their own contributions, interpreted by the matching of ILTs and IFTs to leaders and followers as their currency of exchange. Such congruency are therefore vital in determining their relationship qualities.

Expanding on that, the congruence of leaders' and followers' perceptions would amount to a higher LMX ergo improved leader-follower relationship as such congruency allows for both parties to base their behaviours on the same scale and to interpret each other's actions accordingly Van Gils, Van Quaquebeke, and Van Knippenberg (2009), Sy (2013) and Tram-Quon (2013) later discovered that the relationship quality is also improved when both leaders and followers hold more positive IFTs, solidifying the notion.An interesting point brought forward by Van Quaquebeke and Brodbeck (2008) involves the idiosyncrasy of implicit theories following the assumption that IFTs (and ILTs) are formed through a collective socialisation process and individual experiences; unless both leader and follower have walked similar paths through life, perfect congruence of IFTs and ILTs and therefore perfect LMX agreement is particularly unlikely.

Tsai et al. (2017) initiated an in-depth understanding of relational schemas involving two types of schemas, namely expressive relational schemas (ERS) and instrumental relational schemas (IRS); the former relating to social support and the latter to short-term economical exchanges. According to their study, positive follower-rated LMX was related to ERS congruence while negative LMX was related to both incongruence and congruence of IRS. Results therefore suggest that leaders as well as followers who internalise short-term economical exchanges mostly as their schemas of work relationships would mostly likely abstain from spending time and energy to form high quality interactions in an organisational setting (Foti et al., 2017).

Goswami, In Park and Beehr (2020) more recently solidified the notion of the relevance of congruency of ILTs and IFTs for positive outcomes through a practical investigation. The results showed the strong relevance of congruence for improved LMX in addition to overall improvement in organisational citizenship behaviour and in-role performance. While the study is the first of its kind, the recommendation put forth to conduct trainings for both leaders and followers on how IFTs relate to actual followers and their interchangeable relationship is highly warranted with the backing of predeceasing studies.

Leader's perception on actual followers have always been assumed to align with their IFTs. Congruence in this context refers to the extent the implicit theories are similar between leaders and followers. In the field of ILTs, the congruency between the leader and the leader schema in

question affects their follower judgements and perceptions about a leader. ILTs and IFTs are two sides of the same coin thus the same can be said for followers (Van Quaquebeke, Van Knippenberg, and Brodbeck, 2011; Lord et al., 1984). The core of the mutual influence process involves the degree of interpersonal congruence in leaders' and followers' implicit theories (Coyle and Foti, 2015, Engle and Lord, 1997) straying from the traditional view that leaders' behaviours influences their followers' behaviours in a unidirectional manner. It is such that Lord and Maher (1993) provided a theoretical framework to interpret the effects on IFTs and ILTs on their dyadic relationship albeit from a leader-centric standpoint.

Several studies have already explored the relationship between IFTs and positive outcomes such as job satisfaction, performance projections, and LMX to name a few (Whiteley et al., 2012). However, the assumption that congruence has already been achieved poses a threat to the degree of validity of their results.

Goswami, In Park and Beehr (2020), as previously mentioned was the first to test the congruence between IFTs, perceived behaviours and actual behavioural outcomes, shedding light on a heavily assumed factor that is pivotal in IFTs. The study established that the congruence of positive perceptions of actual followers as well as IFTs are positively correlated to follower performance. Previously, IFTs only focused on positive traits through the recognition of negative traits have been recently introduced into the field as it advances. However, the recognition of negative antecedents such as intense supervision, counterproductive work behaviours and excessive power exertion, are scarcely investigated (Goswami, In Park and Beehr, 2020) which could be more insightful overall as individuals tend to have stronger actions and effects when negative emotions are involved pertaining to a wide range of issues, generally speaking (Baumeister et al., 2001) as when compared to that of positive emotions. Taking into account the negative traits, the congruency applies to the situation as well as high amounts of negative experiences with employees as well as IFTs are positively correlated with lower performance levels and high counterproductive work behaviours.

Active mentoring has long been a notable theme in ethical stewardship of organisational behaviour (Allen et al., 2017). However, the role of IFTs in bridging the gap between positive leadership and active mentoring have not been discussed as of late despite the gap of knowledge in why some leaders are more proactive in mentoring then others. More recently, active mentoring has been highlighted by Yip and Walker (2021) as a notable outcome of positive leader's IFTs. The study successfully identified and demonstrated 2 pathways of mentoring from leader's social cognition namely, leader integrity and relational engagement by focusing more on the physiological antecedents rather than the consequential outcomes.

5. RELEVANCE OF ENVIRONMENTAL AND CONTEXTUAL FACTORS IN IFTS

From the current body of knowledge, the influence of environmental factors in creating divergent IFTs have been highlighted repeatedly. Of which, the most apparent differentiation observed was between the operationalised methods to measure IFTs. It was reported by Junker et al. (2016) that discrepancies in the item set generated to formulate their scales were apparent when compared to that of Sy's (2010) trait list. As these scales were put forth for widespread use within the field of IFTs, this brings into question the validity of each scale for general use. It is such that the concern of leaving out or undermining specific traits that may be relevant to different environments may cause inaccuracies in the results obtained. Therefore, this section is aimed at discussing the various environmental factors that have been substantiated thus far while analysing and identifying the gaps in existing literature.

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5.1 Parental Figures and Early Childhood

Cognitive structures form and evolve through the continuous interaction with environments both internal and external as stated above that implicit followership theories form through internalisation of stimuli. Furthermore, the family environment is crucial in forming an individual's implicit cognitive aspects from an early stage, where irritant events could be attributed to a variability in implicit cognitions to others. This is due to the fact that parental figures can be thought of as leaders in their family, posing as their first interaction with a 'leader' as a follower. Parent-child interactions and parental rearing therefore heavily influence what individuals would proceed to view as leadership and followership traits in an organisational setting as Keller (1999) stipulated.

To that end, IFTs can be manipulated to comprise of specific notions from an early age to cultivate an individual with specific beliefs later in life, barring any substantial events. Notably, a study revealed parental rearing patterns that veer on the side of authoritative and bureaucracy tend to result in a negative followership prototype instilled into their offspring whereas a more democratic parenting style have a higher tendency to translated into positive followership prototype due to the sense of empowerment and cooperation involved (Guo, 2018). An argument to be had is that the negative actions of parental figures in early life could affect individuals to both extremes such that, if they adopt the realisation that the parent-child relationship is bad may result in ideal IFTs to veer on a more positive note such as to be more outspoken or interactive, or if they relive that relationship to be representative of reality that their ideal IFTs would veer on a more bureaucratic note as previously mentioned.

Such results does call for the industry to investigate further on the early childhood influence on IFT formulation that could draw focus on improving the lifestyle choices of new parents to take into account the communication skills or perhaps to allow for an enlightened selection process of candidate employees when hiring that treats rearing styles as an antecedent to selecting individuals with positive IFTs to facilitate improved LMX.

5.2 Organisational Background

The generalizability across various settings have always been presumed in the grand scheme of things however accompanied with empirical backings in recent years to validate the assumption. Several have displayed the lack of systemic differentiation between individuals of different backgrounds namely, students and employees (e.g. Junker et al., 2016). However some theorists have proposed that a variation in IFTs may occur according to the organisational climate with Guo (2018) stating that individuals within an organisation that deals with a turbulent marketplace may endorse good citizenship and innovative behaviours, as well as Epitropaki et al. (2016) highlighting the distinguishable IFTs between hierarchical levels of individual, group, and company. Indeed education levels have also served as a determinant in IFT endorsement variation (Sy, 2010) though the effect size was small.

Every result obtained thus far require replication to substantiate the results and are confined to a specific group of individuals. As previously mentioned, the notion that variations may arise under varying organisational climates may be a fruitful avenue for future exploratory research adding to the vast insights on not only varying nations and regions but also industries. Per contra, several studies have utilised samples across different organisational backgrounds to obtain a representable result that covers a wide spectrum. However, the averaging negated the distinct differences that may have potentially arisen from different backgrounds potentially with different traits having different factor loadings. This may in turn provide higher confidence (or lack thereof) of the universal methods that are employed currently as antecedents that may be specifically prevalent in other regions and organisational climates may very well be overlooked if such effects are not to be discussed.

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5.3 Gender and Age Discrimination
It is widely known that women have been vastly overlooked and underrepresented when being considered for leadership positions in society and organisational settings alike. Women have been faulted with having a lower power motivation on average than that of men (Hernandez Bark et al., 2016), lacking the characteristics to fit the image of a typical leader (Heilman, 2012), and failure of female leaders to support and transfer success to other women striving towards achieving higher positions (Derks, Van Laar, and Ellemers, 2016) as factors that constitute such biases. It is such that women have been more strongly associated with follower positions as a conclusion of said incongruence with leadership positions though most western countries today have begun to promote gender equality in the workplace.

The truth being that limited research regarding the follower role with respect to women have been conducted thus far. Recently, Braun et al. (2017) filled the gap of knowledge revealing the explicit gender bias in IFTs. While more ideal characteristics in both task and person oriented activities were associated more so with typical female followers than that of male followers, participants within the study also disclosed more positive IFTs when describing typical female followers and less counter-ideal characteristics, independent of participants' gender. Men on the other hand were significantly rated higher in counter-ideal person-orientation though counter-ideal tasks were indifferent. Moreover, a second test utilising indirect measures within the study revealed a stronger implicit association of women with ideal followers and less so with counter-ideal followers than that of men but only in female participants. Accordingly, the results highlighted the effect of women adhering to their congruent social role (Eagly and Karau, 2002) as it demonstrated the push effect of keeping women from leadership positions but also a pull effect towards followership thus confined by not only a 'glass ceiling' but also a 'sticky floor' (Braun et al., 2017).

Several authors have revealed that the follower age are influential towards the IFT fit as the elder employee fits IFTs less than that of younger employees (Gordon and Arvey, 2004; Krings, Sczesny and Kluge, 2011). Despite its illegal nature in various countries, age discrimination in the workplace has prevailed overtime (Gordon and Arvey, 2004). The age bias can be attributed to the negative IFTs associated with elders such as low cooperation, lack of flexibility, lagging in new developments, low creativity, more passive and risk averse (McGregor and Gray, 2002) despite having no objective relationship between productivity and age. Subsidiary information from studies partially supports the age bias claims as individuals describe ideal employees as industrious and enthusiastic contrary to that of older employees who are perceived to have lower physical capabilities and lower motivation (Junker and Van Dick, 2014). However, a contradiction arises that while experience, being the most valued characteristic of working individuals correlate positively with age, older workers are also perceived negatively pass a certain age point. In that sense, there exists only a small window by which an individual would be preferred when both experience and maturity converge.

The bias may be counterproductive to a certain extent as loyalty and reliability which are commonly associated with positive IFTs, are also positively correlated with perceptions of older employees (Kite et al., 2005). Limited as may be, validation through experimentation has yet to be achieved with regards to IFTs specifically as based on the available research, the biases could contribute to lower LMX and job satisfaction consequential of the biased perceptions rather than their actual actions. An important implication on reducing the age bias arises from the aging population that is occurring across the globe forcing individuals from different generations to compete for the same jobs or work together. Additionally, while women have been previously presumed to adhere to the housewife and contribute in terms of household activities, the increasing cost of living in general has prompted women to financially contribute by entering the workforce. Today, women have strayed far from that stereotype proving the equal competencies to men in various fields and improving their national economy. Therefore, while the prototypical

biases that are associated with women causes for missed opportunities and discouragement, it could thus detrimentally affect the organisational performance and the economy.

More studies should be conducted as a result to substantiate negative effects of age and gender biased IFTs which could translate into training initiatives and early education. IFTs may therefore aid in drawing insight on the perceptions that gives rise to age and gender biases which may be utilised to curb the occurrence. As we approach the age of a multigenerational and gender-neutral workforce, trainings and workshops could be developed in accordance to said insights as to reduce the negative effects.

5.4 Cultural Differences
As we have previously stated the influence of early childhood environments and in the construction and development of IFTs, the difference in cultures across the globe cannot be neglected as a varying factor in the study of IFTs. Most studies have only been conducted with regards to the western hemisphere, particularly in the United States of America and Germany. Culturally speaking, the divide of cultural norms and habits between the eastern and the western countries are significant thus, unavoidable in the present discussion. From a general standpoint, ideal followers are thought to display respect for authority, loyalty and devotion in the eastern countries as a reflection of the strong culture of respect for others. However, the respect that is emphasized in eastern countries, alongside obedience are thought to be negative follower traits in western countries, as discovered by Hoption, Christie and Barling (2012). Indeed, an exploratory cross-cultural study by Dunham and Holzinger, (2006) displayed the influence of cultural difference on the construction of an individual's IFTs. Moreover, the generalisation of the typologies in Asian countries are reduced to those that represent the drivers of the eastern economy, namely China, India and Japan whilst ignoring the vast variation in cultures across the rest of the region, particularly in Southeast Asia alone. Especially in Asian countries such as China and in Southeast Asia, leader and follower power imbalance is more significant than that of the western hemisphere as leaders are expected to take more responsibility, decision-making and risk but also that the cultural values emphasize on the social strata in political and business circles to achieve business objectives (Lawrence, 2017).

A notable study in particular involved an exploratory study of follower prototypes in Asia and South America by Holzinger and Dunham (2006) during the early years of implicit and prototypical studies of followership. The exploration revealed that even then, sparse information were available on followership characteristics outside USA and have gathered implied traits in prior texts including loyal, submissive, conforming to hierarchy, conflict avoidant, understanding and focused on collective goals for Asian followers while Latin American followers were implied to be trusting, loyal, deferent, and group orientated. However, results from interviews of several individuals from Asia and Latin America revealed differences. Particularly, Argentinian individuals emphasised the right to supply critical input as a follower while Brazilians preferred less assertive followers with good communication, and Mexican individuals idealise respect and authority, showing vast differences across the Latin American region alone. Interviews conducted on individuals from Malaysia, China and Thailand on the other hand showed high congruency among one another similar to the previously stated values excluding submission and conflict avoidant. Per contra, the results were a reflection of a small sample size collected more than a decade ago. With the turbulent nature of the economies of the countries in focus, results may vary accordingly prompting more prominent studies to be conducted on the claims.

Drawing from the results gathered, cultural differences have been the most promising in displaying differences that may arise. While results gathered may merely be at the tip of the iceberg seeing that the previously mentioned factors could also tie into different cultures; age discrimination could prevail more so in countries that display a more autocratic leader-follower relationship or are in a developing state as compared to more open and developed regions.

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Gender gaps in the workforce have been substantially documented to be more prevalent in certain regions reported in Global Gender Gap Index Report (2018) where IFTs could serve as a contributory factor in its emergence. IFTs in different organisational backgrounds have also been substantiated but could potentially differ in varying countries in the same industry. Cultures which align age with hierarchy may very well give rise to varying results in IFTs as well. Various combination of contexts could potentially conjure different IFTs which therefore emphasises the relevance of the field in question and beckons for more studies to be conducted.

Results obtained from the culmination of scales that operationalize IFTs alone have already brought forward discrepancies. Junker et al.'s (2016) scale that involved participants located in Germany showed considerable variation in weightage and composition when measuring typical follower traits in study 2 to test the ability to distinguish between typical and ideal followers, when compared to the predated method by Thomas Sy (2010) which took into account participants from USA to measure typical follower traits. Kopelman (2012), while not directly referring to IFTs, developed a modernized adaptation of Kopelman et al. (2008) to form the 24-factor scale to assess Theory X and Theory Y assumptions of employee behaviour; whether they were industrious or lazy, capable or incapable/useful, and trustworthy or untrustworthy. While Sy's interpretation draws more on behavioural traits (e.g. arrogant, loyal), Kopelman focuses more on task oriented traits (e.g. lazy and do not want to work, trustworthy) presenting some discrepancies on what are deemed as favourable traits.

More recently, Mohamadzadeh, Mortazavi, Lagzian and Rahimnia (2015) conducted an exploratory study on followers' IFTs in Mashhad, Iran illuminating the field on possible variability between countries, measured against the existing results from USA and Germany. The researchers employed a qualitative method in efforts to build themes from participants' views along with a notable sampling method, having a wide spectrum of followers from various public organisations of varying backgrounds and different at different organisational levels to fulfil the broad spectrum of Mashhad's employees. Of which, 5 major prototypes were codified pertaining to 21 positive characteristics and an anti-prototype with 5 characteristics of role deviances; the prototypical categories namely, constructive perception of work, mighty arm of leader, job competencies, moral virtues and initiation.

Variations observed from USA, Germany and Mashhad, Iran calls for individual scales to be developed with respect to the country of study. Though a large overlap of traits can be observed, certain traits may be omitted as a result of a general scale used to that effect or that the prompts utilised based off the existing scales may potentially influence a cognitive bias. Though the variation in traits generated may be attributable to the variation in collection method and sample individuals, the results do provide insight on the different traits that present from different regions. Notably, traits such as 'accepting poor working conditions' have not prevailed as an antecedent relating to task in the other two scales. Accordingly, there are only one factor of 'role deviances' that account for anti-prototypic IFTs which could potentially undermine the negative connotations of followership in Mashhad. Additionally, the 'mighty arm of leader' is not prevalent in the other two scales as well. This could account for the preference towards a more hierarchical structure of leader-follower relationships in Iran as supposed to the Western hemisphere.

Sy's method		USA	Junker et al's method	Germany	Kopelman	USA	mohamadzadeh et al's method	Mashhad, Iran
Industry		hardworking		thinking ahead	industrial	are industrious	constructive perception of work	immediate relation with the work
		productive		educated		work is as natural as play or recreation		wide working area
		goes above and beyond		intelligent		naturally like to work		expert
		excited	ideal task	assumes responsibility		willing to work more than the minimum required		team member
enthusiasm		outgoing		engaged	capable	ideas often result in the development of useful suggestions		creativity
		happy		interested		capable of providing ideas that are helpful to the organisations		acceptance of poor working conditions
good citizen		loyal		determined		posses imagination and creativity	job competencies	productivity at work
		reliable		conscientious		help managers to make better decisions/solve problems		punctuality at work
		teamplayer		cooperative		can and will exercise self-direction/self control		punctuality/timeliness
conformity		easily influenced	ideal relationship	communicative	trustworth	prefer to set their own objectives and goals	mighty arm of leader	rule of law
		follow trends		team minded		are trustworthy		supporting the leader
		softspoken		creative		prefer to figure out how best to do their jobs		source of information
insubordination		arrogant		aggressive	not industrious	try to do as little work as possible		consultant
		rude		malicious		naturally dislike work (it's basic nature)	moral virtues	human skills and social relationships
		bad tempered		uncooperative		lazy and do not want to work		integrity
		uneducated	counter ideal relationship	insubordinate	not capable	will slack of if left alone by managers		morality
incompetence		slow		indifferent		lack creativity and imagination		pioneering
		inexperienced		rude		have little to contribute when asked to participate indecisions/solving problems	initiation pattern	intellectual independence
				irritable		ideas are generally not useful to organisation		sense of ownership and beneficiary
				passive	not trustworthy	lack the ability to help the organisations		responsibility
			counter ideal task	incompetent		prefer to be told exactly how to do their jobs		personal excellence
						cant be trusted	role deviances	destructive behaviour
						will not exercise self-control and self-motivation		obedience
						prefer to have someone set their goals and objectives		incompetency
								indifference

FIGURE 1: Summative table on the traits within the scales formulated to examine IFTs in separate studies based of individuals from USA, Germany, and Mashhad, Iran respectively. The results highlighted in dark grey pertains to the anti-prototypic or counter-ideal traits while the light grey section pertains to the prototypical or ideal traits.

While Chinese followers have been previously hypothesized to have weak co-production beliefs, passive followership behaviours, and low collectivism levels however, a notable study conducted recently revealed the opposite. It is such that the survey presented co-production belief levels that were higher than that of the USA samples in Hofstede's culture scores, consisted across gender, age, and tenure (Lawrence, 2017). Contradictions of such was also revealed in the power distance index where previously hypothesized to be high was actually low in comparison and uncertainty avoidance, collectivism and motive were all high, contrary to previous culture scores. These findings may be attributable to inaccuracies of previous results or simply the evolution of China's population over time as the country develops thus denouncing the previously acclaimed negative connotations of followership in China. Timely information with improved accuracy of such may aid global leaders to seamlessly immerse into different cultures as they expand overseas as well as to provide preliminary insights onto countries of a similar culture.

What may be deemed as a favourable follower in USA may very well not apply to other countries. Such discrepancies may enhance the widening gap in implementation of IFT ideologies in the workplace. Perhaps more consistent and comparable results could be captured should a uniform method of evaluation be conducted with the same level of depth. Results from there could draw insight on the paternalistic nature of certain continents and how they could progress over time potentially. The formulated national scale then be used to measure the variations that arise according to the previously mentioned factors such as industry.

6. DISCUSSION

The field of implicit theories have been instrumental in shedding light on the cognitive realm of organisational studies. IFTs (and ILTs) in particular have contributed to the understanding of the biases that exists between leaders and followers. Knowledge of its existence has always been present but many have atrociously speculated on the cognitive perceptions of individuals with little empirical backing all the while neglecting its influence on organisational performance and importance when prompted by theorists. However, implicit theories have been finally recognised as previous findings have indicated that leaders' IFTs accounts for more than 60% of variances experienced on employee ratings owing to individual perceptions of interactions (Scullen, Mount and Goff, 2000).

Organisational implications have been widely documented with IFTs serving as antecedents of follower's leader liking, job performance, LMX, job satisfaction, active mentorship and performance ratings (Epitropaki et al., 2013; Sy, 2010; Junker et al., 2014). Whiteley et al. (2012) in particular were one of the very few who explicitly displayed leaders' prototypical IFTs influence on performance through manipulation of performance expectations. However, the method utilised to measure follower performance was achieved through a reporting system from their peers which brings into question the cognitive biases that arise from the rater. Where organisational outcomes pertain to employee creativity specifically, an exploratory study in China postulated on the influence of IFTs on employee creativity with LMX, intrinsic motivation and self-efficacy as mediators independently (Kong, Xu, Zhou and Yuan, 2019). Indeed, most of the previously mentioned studies have measured outcomes that may contribute to improved organisational outcomes, the field still lacks studies beyond the aforementioned paper that explicitly investigates the organisational outcomes on an empirical level albeit due to the difficulty in manipulating variables while maintaining uniformity across the board. Without such information, it provides little incentive for organisations to incorporate trainings that targets cognitive biases and implicit theories into their employee development risking a low or negative return on investment. Furthermore, the results achieved by previous research may be isolated incidences as the lack of widespread adoption provides little confidence in its reproducibility due to varying environmental factors such as organisations from different countries or multinational organisations which may have differing results if they were to act on such data. On the contrary, insight gathered to date

have been useful no doubt in advancing the field and laying the groundwork for in depth studies to be conducted in the future.

Upon research, discrepancies were vastly observed on the methodologies involved in measuring IFTs. Variations were present from the conceptual standpoint as well as the theoretical underpinnings at bay. Conceptually speaking, the greatest discrepancy observed was pertaining to the prototypical dimensions used as some have collapsed the ideal and typical prototypes into a single construct (Sy, 2010), carelessly interchange the assessment criteria (Epitropaki and martin, 2005) or failed to state the method by which they are utilising (Junker and Van Dick, 2014). Such variation may have potentially contributed to the slow growing pace of IFTs. Though Junker, Stegmann, Braun, and Van Dick (2016) have attempted to clear up the confusion through the introduction of an alternative scale, widespread use has yet to be observed. While there is a consensus on the categorisation theory as a model for interpretation, many have delved into various others to elaborate on the topic all the while investigating the same perspective owing to the overlapping nature of various existing theories especially within the range of social cognition (e.g. Patel and Ruchi, 2017). In addition to the scale, Junker and associates brought up the notion that effectiveness, being the widely used orientation, and the newly introduced person orientation, are merely subtypes of the bigger picture meaning that there are be more subtypes to be explored.

A common criticism to be acknowledged is pertaining to the use of explicit measures such as self-reporting systems and direct assessments to infer on implicit phenomena. Such allegations place the majority of the results collected thus far to be potentially distorted or void in the worst-case scenario. However, several literatures have reflectively pointed out the lack of evidence that support those claims as individuals for the most part have introspective access to their implicit theories (De Houwer et al., 2009, Fazio and Olson, 2003). On the other hand, having awareness of one's implicit theories may potentially differ to the accuracy of the underpinnings that contribute to the conception yet, alternative methods are absent. Perhaps a more practical approach may be considered to determine the significance of IFTs (and ILTs) whereby training programs for the work force that support the congruency of leaders' and followers IFTs may provide insight on its influence on organisational outcomes such as organisational citizenship behaviours and counterproductive work behaviours.

While many have chosen to either focus on IFTs or ILTs, it has come to light that most studies provide more meaningful insights when exploring the factors in combination as two sides to the same coin. By doing so, a more holistic view of followership as well as leadership can be portrayed and their interrelations better depicted. As we commonly put forth that there exists no leader without their followers, combinatory studies may be able to observe the cause and effects consequently with respect to LMX. Nevertheless, all studies are with limitations and resources may hinder the ability to effectively cover both aspects.

While we have lightly discussed anti-prototypic IFTs, its contents and its importance, limited information have been put forth on the associated implications and effects on followers. The study of unethical leadership has been widespread but such leadership cannot exist without the followers who grants and accepts such behaviours (DeRue & Ashford, 2010). More specifically, Knoll, Schyns, and Petersen (2017) examined the role of followers in unethical leadership with respect to IFTs as previous studies revealed that such behaviours are based on intuitive and reflexive processes to a considerable extent (Reynolds, 2006) and that characteristics depicting effectiveness of followers may not necessarily indicate ethicality as conscientious people may contribute to unethical outcomes in certain circumstances (Carsten & Uhl-Bien, 2013). More recently, Goswami, In Park and Bheer (2020) have also made use of the anti-prototypic IFTs in their study through the outcome of abusive supervision as a mediator of negative IFTs from both leader and follower which gives a more well rounded discussion on the implications of negative traits.

Results ascertained disclosed that individuals that strongly maintain the Good Citizen IFT were more likely to comply with a leader's discriminatory action in a personnel selection decision while individuals that strongly maintain the Insubordination IFT were less likely to do so (Knoll, Schyns, and Petersen, 2017). According to Sy's (2010) IFT framework and the critically acclaimed organisational citizenship behaviour (Organ, 1988), good citizenship involves contribution towards the greater good of the community or organisation; validated by the second study conducted which stipulated that the individuals who upheld the Good Citizen IFT had an increased tendency to comply or contribute to unethical behaviours if their leader links the action to the betterment of the organisation (Knoll, Schyns, and Petersen, 2017). The Insubordination IFT while associated with the negative prototypes of followers, may very well hinder the progression of unethical leadership behaviour ironically as their second-order factors (Arrogant, Rude and Bad Tempered) make them unlikely to accept authority nor grant leadership to others (DeRue and Ashford, 2010).

Though particularly nascent, the results offer promising inferences on the influence of IFTs in unravelling unethical acts according to situational demands. Additionally, negative IFTs may vary with environments and cultures as observed in Table 1. Interesting results of such kind beckons more studies to be conducted in exploring more forms of unethical behaviours and implications alike.

7. CONCLUSION
As limitations have persisted in all research conducted to this day, this paper is of no exception to the others. Literature discussed in this paper are within the limits of availability as several journals may be confined to exclusive or paid access therefore not covered in this paper. Furthermore, the limitation of time and length of the paper does provide a hindrance in the depth of the discussions held throughout the study which may be lacking and may affect the overall outcome. Additionally, as the study does cover the global aspect of IFTs, the information gathered are confined to those that have been published in English as nations may contain insightful studies written their native language succumbing to language barriers. The integrity of results from studies conducted in the field to date may be inaccurate as most studies have utilised a self-reporting method of interviews or surveys. This may affect the results collected in the studies as the implicit aspect of IFTs does suggest that some perceptions may be outside one's awareness. Lastly, the criticisms adopted throughout the paper are opinions held by the author that were achieved through individual analysis therefore may reflect incorrect in reality or the future thus leaving room to be disproven. However, the study has been carried out to the best ability of the author who stand by the work that has been put forth.

Implicit theories today have brought vast insight into the field of Organization and Management Theory (OMT) (Cristofaro et al., 2020), expanding our knowledge on how cognitive effects can influence individuals in organisational settings. IFTs being fairly new still has much potential to elevate organisational studies in such a way that the material formulated may change the way organisations approach followership development and LMX improvements. Information on negative effects that leaders bring to the table in influencing followership behaviours could prompt management to hinder from such behaviours and minimise the effects when detected. Indeed, cultural phenomena has proven to affect the typical IFTs retained in certain regions showing how malleable IFTs may be in varying environments. The differences observed draws insight on how cultures who are more autocratic in nature may have a more submissive IFT composite thus studies on similar cultural backgrounds may illuminate some congruencies among them along with changing the narrative on outdated assumptions of some nations. While notable differences were observed between Iran, USA and Germany, future studies may produce interesting results on Asian countries, with Southeast Asia in particular as they have been widely ignored overall albeit rapidly developing and improving in multiple dimensions of infrastructure, economy, and lifestyle to name a few. Through such studies only can the scales be truly universally adaptable instead of treating the results from the Western Hemisphere as the norm. In the day in age of

cultural awareness and worldwide economic turbulence, it is ignorant to adapt said treatment of data. With the current results, attempts could potentially be made to develop new training methods targeted towards leaders' behaviours, increase awareness within management bodies of IFTs and their associated effects and/or to improve followership through training programs, in efforts to LMX. In light of that, preliminary studies on the effects of such trainings may be insightful through thorough control and manipulation of variables for empirical backings and development.

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Applicants' Reaction Towards Asynchronous Video Interviews in Predicting Behavioural Outcomes: The Role of Culture as a Moderator

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Abstract

Organisations are increasingly using asynchronous video interviews to assess candidates. In view of the recent pandemic, Covid-19, hiring managers and HR practitioners had to think creatively to streamline their recruitment process. The current study utilised a cross-sectional method among 119 job applicants to investigate applicants' reaction in asynchronous video interviews in predicting their behavioural outcomes and whether culture moderates these relationships. It is hypothesised that applicants' reaction (i.e. applicants' perception of fairness and favourability) will significantly predict applicants' behavioural outcomes (i.e. applicants' recommendation intentions, withdrawal intentions and perceived procedure performance). Moderation analysis was conducted to examine the moderation effects of culture. Results demonstrated that applicants' perception of fairness towards AVIs significantly predict all behavioural outcomes. However, applicants' perception of favourability towards AVIs only predict recommendation intentions. Also, this study showed that culture only moderates the relationship between applicants' perception of favourability and perceived procedure performance. Limitations, suggestions for future direction and practical implications based on the findings were also discussed in this paper.

Keywords: Applicants' Reaction, Behavioural Outcomes, Culture, Asynchronous Video Interviews (AVIs).

1. INTRODUCTION

Since the 2000s, the advancement of technology has emerged as a key medium in the Human Resource (HR) practice for personnel selection and recruitment (Lievens & Harris, 2003). According to research by CB Insights, HR technology industries have invested more than $2 billion in promoting the use of technology to facilitate HR processes such as learning, recruitment, and employee engagement to improve human resource management (Bersin, 2016). Employment interview is one of the key roles of human resource management and also an essential component to the personnel selection process (Torres & Mejia, 2017). Due to the recent global pandemic (i.e. Covid-19), the use of technology in personal selection has significantly increased with 8 out of 10 hiring managers now utilising technology as a key part of their personnel selection (Steinberg, 2020).

Traditionally, the applicant selection process involved face-to-face assessments or interviews between the applicant and the interviewer(s). However, due to an increase in the usage of information technologies for personnel selection, the means of interviewing have undergone a major revolution. Preliminary interviews are now mostly conducted online. For example, Winzenburg (2011) found that skype interviews accounted for 12-18% of hiring interviews, bypassing traditional face-to-face interviews. HireVue a leading interview technology platform, supported over 10 million virtual interviews and has seen a 24% increase in users during the past

year (Cummings, 2021). Similarly, Modern Hire an interview technology organisation, mentioned that they have collectively conducted over 20 million online interviews and saw an increase of 40% in users in 2019 (Rubinstein, 2020). Furthermore, the amount of job applications have increased dramatically due to the Covid-19 pandemic, as individuals are aggressively seeking out for employment opportunities, similar to what was observed in the last recession (Weber, 2012). In the past year, it is also noticed that organisations have become more dependent on using technology-based interviewing platforms as part of their recruitment process (Cummings, 2021). By using technology-based interviewing platforms such as video interviews organisations can save costs and time, both for the organisation and the applicant. Additionally, there are other benefits to use new technology for personnel selection which includes amongst others, standardisation of recruitment process, efficiency and extension of applicant pool (Chapman and Webster, 2003). Conversely, Stephen et al. (2019) asserted that applicants perceive technology-based interviewing platforms as less fair and favourable, as they find it more challenging to regulate and understand conversations when done virtually as compared to face-to-face interviews.

Although there are potential advantages of implementing technology-based interviewing platforms as part of the selection process, the possibility of undesired effects experienced by the applicants (Brenner et al., 2016) should also be taken into consideration. The study of applicants' reaction is crucial as it does not only influence applicant's perceived organisational attractiveness, but also affects their intention to withdraw from the interview process, recommend the organisation to others, or accept the job offer (Steiner & Gilliland, 2001; Anderson et al., 2004; Hausknecht et al., 2004). Hence, understanding its prevalence and procedural fairness on applicants' reaction and acceptability of technology-based interviewing platforms as a selection process would shed great insights to this area of research now and in the future. Moreover, technology-based interviews will have staying power moving forward given the growing trends for use of technology in recent years. A study found that over 50% of hiring managers are performing interviews remotely during this pandemic and 20% of them believe this will be the new normal and a permanent benefit (Addison, 2020). Personnel selection and recruitment research over the past years have mainly focused on the organisational perspective whereas only a handful of studies have focused on applicants' reaction (Anderson et al., 2004) towards applicants' behavioural outcomes. Therefore, this study aims to expand the current research by examining applicants' reaction towards technology-based interviews in predicting applicants' behavioural outcomes.

In today's increasingly globalised workplace, more organisations are seeking to build and expand their workforce by hiring international employees to provide different insights and experiences. As such, technology-based interviews can help save time and money for organisations and job applicants who are geographically dispersed (i.e. applicant does not need to travel to the organisation for the interview), while expanding the applicant pool size and diversity range. However, little is known about how applicants from different background cultures specifically from collectivistic countries may react to technology-based selection process, given the majority of research and theories regarding applicants' reaction adopt a US-centric perspective (i.e. individualistic culture perspective) (Allen et al., 2014). This narrow outlook may be misleading, especially in today's increasingly global network of opportunities. It is uncertain whether the findings to date which mostly adopts individualistic culture perspective can be generalised to cultures from collectivistic countries. Moreover, in the field of organisational psychology and behaviour, scholars have found that 96% of the experiment participants are from Western countries, which only accounts for 12% of the world's population (Henrich et al., 2010). With the growing interest of most organisations to build an international workforce and adopting technology-based interviews as part of their recruitment process, exploring the cultural-level influences serve great insights to this area of research.

Based on the aforementioned and in light of the growing popularity of using technology-based interviewing platforms in these selection process and global recruitment, the present study

attempts to contribute by studying applicants' reaction towards technology-based interviews across individualistic and collectivistic cultures.

1.1 Technology-Based Interviews - Asynchronous Video Interviews (AVIs)
Technology-based interviewing platforms (i.e. online and video interviews) fall into two categories: (i) synchronous video interview (SVI) and (ii) asynchronous video interview (AVI). SVIs are interviews that are conducted in real time, requiring all parties to be online simultaneously, such as Skype, or Facetime, or Adobe Connect; whereas AVIs are not conducted in real-time (non-live), allowing all parties greater flexibility in the scheduling component (O'Connor et al., 2008). In other words, AVIs are also known as 'one-way' interviews where applicants receive an invitation link from the organisation, and will then utilize a web camera to record an answer to the interview questions (Tolan, 2012). Although SVIs are relatively more popular, the usage of AVIs have been on an increasing trend for the past years. (O'Connor et al., 2008). Research has been unable to provide sufficient guidance since AVIs are a novel selection method in recent years and research in this area is nascent. Therefore, this study will utilise AVIs as a research context to understand applicants' reaction towards AVIs and how this affects their behavioural outcomes.

2. THEORETICAL FRAMEWORK
The present study will adopt Gilliland's (1993) organisational justice theory framework (Truxillo et al., 2017) on applicants' reaction. This theory focuses on the perceived fairness of three components (a) procedures and rules used when making decisions (procedural justice), (b) outcome allocations (distributive justice), and (c) respect and sensitivity shown towards individuals (interpersonal justice). The principal assumption of the organisational justice theory in selection context is that applicants' perception towards selection procedures in terms of these three facets of justice will influence applicants' future attitudes, self-perceptions, intentions and behaviours (Hausknecht et al., 2004). For instance, the theory suggests that applicants who felt that they were treated unfairly during the selection process will have negative behavioural outcomes such as not recommending the organisation to others or withdrawing from the selection process. The present study focuses only on procedural justice perceptions because this study focuses on the fairness of the procedures and does not focus on how fair the process actually is which is measured by the other two justice perceptions.

Procedural justice rule refers to the perceived fairness of the procedure used to make organisational decisions (Cropanzano & Gilliland, 2007). According to Steiner and Gilliland (1996), procedural rules comprise of four dimensions: interpersonal treatment, opportunity to perform, perceived job relatedness and propriety of questions. Specifically, procedural rules suggest that these dimensions will influence applicant fairness perceptions of the selection process. Research has demonstrated that procedural justice perceptions influence applicant perspectives towards organisations (Cropanzano & Gilliland, 2007). For instance, if applicants perceive the selection process to be biased or unfair, applicants are more likely to develop negative attitudes towards the organisation (Nikolaou et al., 2019). As a result, applicants may withdraw from the process prior to the opportunity to acquire more information about the organisation or job role. This is because applicants who consider the selection process as unfair are more likely to consider the hiring process to be unfair as well. Likewise, a fair selection process will not only result in favourable applicants' reaction but also favourable outcomes towards and within the organisation (e.g. organisational trust, organisational attractiveness and employee commitment) (Kim, 2009). Therefore, procedural justice is a crucial facet of applicants' reaction towards personnel selection.

Applicant reaction is described as "attitudes, affect, or cognitions an individual might have about the hiring process" (Ryan & Ployhart, 2000, p.566). In this study, applicants' reaction refers to a job applicant's thoughts, feelings, and attitudes towards AVIs as part of their job application process. The study of applicant reaction is crucial because if applicant perceives the selection

process to be unfavourable or unfair, this may influence their behavioural outcomes. For instance, they are less likely to accept the job offer and to recommend the organisation to others. In fact, applicants who have negative experiences during the selection process may even dissuade future applicants from seeking employment with the organisation (Hausknecht et al., 2004). Essentially, a biased selection process may not only impose a negative image of the organisation on the applicants but may also cause the organisation to lose top candidates (Hausknecht et al., 2004). Therefore, it is important for organisations to take note of applicants' reaction to avoid potential losses to the company - be it in terms of losing top candidates, or in the worst cases, facing potential lawsuits.

The present study will examine how applicants' reaction predicts behavioural outcomes, focusing on perceived procedure performance, recommendation intentions and withdrawal intentions. Recommendation intentions refer to applicants' intentions to recommend the organisation to others (Konradt et al., 2013). Withdrawal intentions, on the other hand, refer to applicants' intentions to withdraw from the selection process (Ryan et al., 2000). Perceived procedure performance refers to applicants' self-assessed perceptions of performance with reference to the screening tools (Smither et al., 1993). It is important to study these outcomes because when applicants believe they performed poorly on the test, they may view the entire selection process negatively. As a result, applicants may form negative perceptions of the organisation which will then affect their recommendation and withdrawal intentions.

Additionally, Bauer et al., (2001) stated that applicants who feel they are treated fairly in the hiring process, are likely to have a positive impression of the organisation. Cropanzano and Gilliland (2007) also asserted that by having a fair selection process equates to building the foundation for a relationship of trust and justice with the applicants. Besides, in a series of studies by Ryan and his colleagues (e.g. Schmit & Ryan, 1997; Ryan et al., 2000) investigating the relationship between applicants' reaction and their withdrawal intentions to the selection process, found that 12% of the applicants who perceived selection process injustice reported withdrawing from the process. They also found a moderate relationship between justice and withdrawal (Ryan et al., 2000).

Given that applicants' reaction is crucial in personnel selection, and based on the procedural justice rule, it is important to understand applicants' perception of fairness towards AVIs with various applicants' behavioural outcomes. Hence, the following hypotheses are proposed:

H1: Applicants' perception of fairness towards AVIs significantly predict applicants' a) withdrawal intentions, b) recommendation intentions, c) perceived procedure performance.

While it is important to understand how applicants' perception of fairness influences their behaviour, researchers may be overlooking other perceptions that could also be influential. Even though applicants' reaction refers to applicant's attitudes, cognition or affect towards the hiring process, most of the research in this area has mainly focused on applicant's attitudes (i.e. perception of fairness on the selection process) based on the organisational justice theory. Ryan and Greguras (1998) noted that one of the limitations of this area of research is the narrow focus on fairness perceptions and that researchers overlook the fact that preference is a different notion from fairness. Therefore, researchers need to consider other perceptions to fully understand how applicants react to a selection process and how these perceptions may influence their behaviours (Ryan & Ployhart, 2000).

Past studies (Toldi 2011; Guchait et al. 2014) have focused on studying applicants' favourability preference to different selection tools or the overall favourability of the selection tool, but limited research has studied the direct link of how these perceptions influence applicant's behaviour or workplace attitudes. Hausknecht et al.,'s (2004) meta-analysis demonstrated that interviews and work samples were perceived more favourably than other selection methods (e.g. cognitive ability

test, personality inventories, honesty test and biodata). Toldi (2011) also asserted that overall favourability towards AVIs may be positively associated with applicants' behavioural intentions. However, it remains unknown as to what extent do applicants' preference for certain selection tools actually influence their behavioural outcomes as past studies have not directly measured this. Therefore, to address this gap, the following hypotheses are proposed:

H2: Applicants' perception of favourability towards AVIs significantly predict applicants' a) withdrawal intentions, b) recommendation intentions, c) perceived procedure performance.

2.1 Individualistic and Collectivistic Culture

In today's increasingly globalised workplace with an increase in international hiring, it is essential to understand the impact of cultural influences have on the selection process to ensure smooth operations of the organisation. From the organisational justice perspective, Cropanzano (1998) asserts that culture is seen as a lens through which an individual will interpret the procedures and distribution performed by an organisation. While it often depends on what the individual expects in that specific context, culture is likely to influence these expectations as culture shapes the way an individual interprets events and defines what behaviours are deemed to be appropriate. Therefore, as recommended by Hausknecht and colleagues (2004), future research on applicants' reaction should incorporate cross-cultural differences. To date, research examining cultural differences mainly uses Hofstede's (1980) value dimensions, that is individualism-collectivism, uncertainty avoidance, power distance, and masculinity-femininity. These dimensions are potentially helpful in understanding the consequences and causes of national differences in organisational justice reactions (Steiner & Gilliland, 2001). The current study will operationalise culture as individualism-collectivism at a country level.

Specifically, individualism is defined as a preference for a loosely-knit social framework in which individuals are only concerned with themselves and their immediate family members (Hofstede & Bond, 1984). Conversely, collectivism is defined as a preference for a tightly-knit social framework in which individuals feel they belong to a larger in-group who looks after them in exchange for unquestioning loyalty (Hofstede & Bond, 1984). In other words, people from individualistic societies have high elements of personal self, (e.g. 'I am smart'), whilst people from collectivistic societies have elements of collectivistic self, (e.g. 'my family thinks I am smart'). Examples of typical individualistic societies are Western Europe, Great Britain, Australia and North America whereas examples of typical collectivistic societies are Asia, Africa, and South America (Triandis, 2001).

It was found that collectivists tend to be extrinsically motivated, improving and changing themselves to meet the demands of society whereas individualists tend to be intrinsically motivated, striving to attain success for themselves as they have a greater need to be seen as unique and to express their freedom of choice (Triandis & Suh, 2002; Barret et al., 2004). Collectivists are also more interpersonally engaged as compared to individualists. Generally, collectivists base their decisions and sense of life satisfaction on social norms and approval of others instead of emotions. Individualists on the other hand, base their own major decisions on their emotions; and it was also reported that positive emotions are strong predictors of individualist life satisfaction (Schimmack et al., 2002; Triandis & Suh, 2002).

Therefore, in an AVIs selection context when the presence of the interviewer is absent, collectivists may not favour this selection process as much as compared to individualists. This may be because, as mentioned, collectivists are more interpersonally engaged, and seek external motivation or approval, thus when interpersonal interactions (e.g. body cues, eye contact, nodding of interviewer in response of approving what they have said) are restricted due to the technology barrier of AVIs, collectivists may react negatively such as withdrawing from the process or having a negative perception of favourability towards AVIs. Besides, past research has proven that individualists favour dispositional explanations to explain their behaviour while

collectivists favour situational explanations (Krull et al., 1999). Therefore, when collectivists do not perform on AVIs, they may associate their failure to the situation (e.g. biased selection procedures). Conversely, when individualists do not perform, they may view themselves as the cause of their failure (e.g. his own ability), thus may not have any negative reactions towards the organisation or the selection procedure.

In addition, researchers have postulated that cultural-level influences may explain the variation in reactions to selection procedures (Steiner & Gilliland, 2001). For example, Walsh et al. (2010) investigated the moderating role of culture practices on the effect of selection process fairness and found that the relationship between organisational attractiveness and perceptions of selection process was positive among all applicants; specifically, applicants who are from societies that demonstrate high levels of performance-oriented practices. Conversely, Ryan et al. (2009) asserted that culture may affect the degree to which selection fairness perceptions predict behavioural outcomes. They attempted to investigate the relationship of selection fairness perception on outcomes moderated by societal culture and whether cultural values explained variability in the effect of perception of fairness on the selection process. However, their findings demonstrated that there were no evidences of moderating effect of culture at either level. In support, past studies that attempted to study the relationship between procedural justice perceptions of selection process and cultural values have also not found any consistent patterns in the relationship (Marcus, 2003; Ryan et al., 2009).

Given the differences between individualistic and collectivistic cultures, it is believed that there may be cultural differences regarding how applicants perceived the fairness and favourability towards AVIs in selection processes. Also, to my knowledge and in reviewing the literature for this topic, the effect of culture on applicants' reaction towards AVIs has not been adequately evaluated in the applicants' reaction literature, therefore the present study would be an exploratory study exploring whether culture influences applicants' reaction towards AVIs in predicting their behavioural outcomes. Hence the following hypothesis is proposed:

H3: Culture moderates the relationship between applicants' reaction towards AVIs and applicants' behavioural outcomes.

3. THE PRESENT STUDY

The aims of the present study are (i) to investigate how applicants' reaction (i.e. perception of fairness and favourability) towards AVIs predict behavioural outcomes and (ii) to investigate how cultural differences moderate the ability of applicants' reaction to predict behavioural outcomes. Past research mainly used lab participants or students as sample, thus the present study will address this issue by using real job applicants instead. Similarly, Chapman et al. (2005) states that fairness perceptions of actual job applicants, as compared to students or non-applicants, towards selection processes are stronger predictors of outcomes. Besides that, there is a narrow line of research in applicants' reaction literature whereby most studies mainly focus on organisational justice theory or perceptions of fairness. Hence, as a new approach, the present study will explore perception of favourability as one of the predictors of outcomes. Additionally, cultural-level influences will also be investigated. The hypothesis of the study are applicants' perception of fairness and favourability are a significant predictor of applicants' behavioural outcomes; and an exploratory study is also conducted to investigate if culture plays a role in moderating these relationships. The results of the present study will highlight whether applicants' perception fairness and favourability towards AVIs predict key outcomes such as recommendation intentions, withdrawal intentions and perceived procedure performance. The present study aims to provide insight for organisations to develop strategies to improve their selection processes, and act as launching pad for future cross-cultural studies in applicants' reaction towards AVIs and behavioural outcomes. The research model of the present study is illustrated in Figure 1 below.
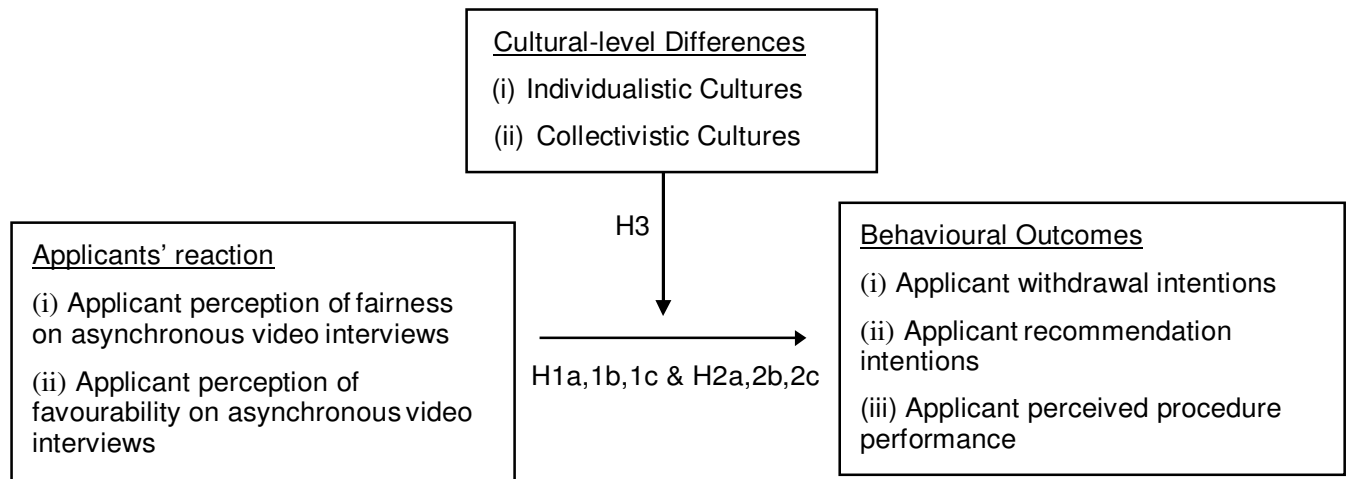
FIGURE 1: Research Model.

3.1 The Research Context
To study applicants' perception towards AVIs, the present study collaborated with Sonru - a technology company that provides automated online video interviewing for screening candidates. Sonru is used by organisations from a wide variety of industries including organisations listed in the Fortune Global 500 companies. Sonru's automated online video interviews are asynchronous. The candidate records their interview answers online through a webcam or mobile device. The interviewers are then able to view the interviews whenever they want. Once the company has invited the candidates to complete a video interview, candidates have a specific timeframe to go online and complete it. During that timeframe, candidates log on to Sonru's website and begin the process. Instructions and practice sessions are given prior to the interview to ensure that the candidate's webcam and microphone are functioning properly. As the interview begins, the candidate will have a specific timeframe to view the question and then respond to that specific question, depending on the interviewer's request. For instance, the candidate views the question on their computer screen or mobile device for 1 minute and then they have up to 2 minutes 30 seconds to respond to that specific question. The process is similar for each question. Upon completion, candidates can replay their answers to see how they have performed, but they are unable to change their answers. Interviewers are notified once the video interview has been completed so they can log on to their account and evaluate the interview in their own time.

4. METHODOLOGY
4.1 Participants
Initially there were 148 respondents, but 29 were excluded as they did not complete the questionnaire. Hence, the sample consisted of N = 119 respondents. Demographic forms were given to all participants to elicit their demographic data as shown in Table 1 below. Participants were grouped into the individualistic culture and collectivistic culture based on their nationality only. This study does not consider where they currently reside.

Demographics	Descriptions
Sample size	N = 119 respondents
Gender	58.7% females (N = 71) and 40.3% males (N = 48)
Age	18 to 64 years old (M = 39.8, SD = 11.5)
Culture	60.5% individualists (N=72) and 39.5% collectivists (N=47)

TABLE 1: Participants demographic details.

This study adopts a voluntary response sampling. The inclusion criteria for the study was any job applicant of various roles who used Sonru's AVIs as part of their application process and were 18 years old and above. Participation for this study was entirely voluntary. The exclusion criteria were individuals with hearing or vision disabilities. Since the present study context involved video interviewing, applicants with hearing and vision disabilities may have more extreme responses as they may feel they are at a disadvantage in this selection tool, and this may potentially skew the results of the study. Apart from that, the job profile, organisation and industry of the job application was not controlled.

4.2. Procedure
The questionnaire was administered using Qualtrics, an online survey tool. An invitation to the participant was sent through an online link posted on Sonru's platform. The link was revealed to all job applicants who undertook Sonru's AVIs as part of their application process and it directed participants to the questionnaire on Qualtrics. Participants responses were assured of confidentiality and anonymity. Before starting the questionnaire, all participants were asked to give their consent to participate. Below is the description of the invitation participants received through Sonru's platform:

> "An MSc in Organisational Psychology student from City University, London, is currently conducting research to understand more about applicant experiences of video interviews. This research aims to ascertain if applicants from different cultures react differently to asynchronous video interviews. It would involve completing another short online questionnaire that will take no longer than 15 minutes.

> This additional survey is voluntary and will in no way affect the outcome of your video interview. Your participation would be greatly appreciated. Click here for more information and to complete the survey."

4.3 Measures
Applicant Perception of Fairness towards AVIs. Fairness was measured with 12 items that were adopted from Guchait et al.,'s (2014) research. Participants were asked to rate to what extent they agreed with each statement based on the recent AVI they took. A sample item is "The video interview method will detect the individual's important qualities differentiating them from others." The score of the scale is calculated by reverse scoring (1=5, 2=4, 3=3, 4=2, 5=1) questions 3, 4, 6 and 8 and summing the remaining questions. Hence, higher scores indicate higher perception of fairness towards AVIs. The Cronbach's alpha for the scale was .85.

Applicant Perception of Favourability towards AVIs. Favourability was measured with 10 items that were adapted from Toldi's (2010) perceptions of video interview scale. Participants were asked to rate to what extent they agreed with each statement based on the recent AVI they took. A sample item is "Video interviewing was a positive experience" The score of the scale is calculated by reverse scoring (1=5, 2=4, 3=3, 4=2, 5=1) questions 3 and 5 and summing the

remaining questions. Hence, higher scores indicate higher perception of favourability towards AVIs. The Cronbach's alpha for the scale was .89.

Behavioural outcomes. Recommendation intentions was measured using the scale adopted from Smither et al. (1993) studies. The item was 'I would recommend this company to others.' Hence, higher scores indicate higher recommendation intentions. **Withdrawal intentions** was measured using the scale adopted from Macan et al. (1994) studies. The item was 'I will continue participation in the application process.' The score for applicants' withdrawal intentions was calculated by reverse scoring (1=5, 2=4, 3=3, 4=2, 5=1). Hence, higher scores indicate higher withdrawal intentions. **Perceived procedure performance** was measured with the three-item scale from Macan et al. (1994). The items were 'I believe I have performed well on the interview that I did today', 'I have control over the factors that influenced my performance on the interview', 'The interview was fair.' The Cronbach alpha for the scale was .58. Due to the relatively low Cronbach alpha, the item 'I believe I have performed well on the interview that I did today' was removed from this study, thus, increasing the Cronbach alpha to 0.64. The score was calculated by summing both remaining items. Hence, higher scores indicate higher perceived procedure performance.

5. RESULTS

The descriptive statistics (means, standard deviation, alphas, and correlation coefficients) for all measures are presented in Table 2.

	Variable	Mean	SD	1	2	3	4	5
1.	Applicants' perception of fairness	45.09	6.57	(0.85)				
2.	Applicants' perception of favourability	30.72	7.52	0.661**	(0.89)			
3.	Recommendation intentions	3.97	0.878	0.710**	0.581**	-		
4.	Withdrawal intentions	1.72	0.736	-0.537**	-0.428**	-0.457**	-	
5.	Perceived procedure performance	7.20	1.65	0.696**	0.552**	0.454**	-0.442**	(0.64)

Note. n=119; **p <.01 (two-tailed). All correlations are Pearson's correlation coefficients (r).

Cronbach's are in parentheses on the diagonal.

TABLE 2: Summary of Means, Standard deviations, Cronbach's alpha and Correlations between the variables.

5.1 Regression Analysis

Hypothesis 1a and 2a predicted that applicants' perception of fairness and favourability towards AVIs significantly predicted applicants' withdrawal intentions. By using multiple regression, the results (see Table 3) show that a significant model emerged, R = .55, r^2 = .30, F (2,116) = 24.56, p <.001. It was found that applicants' perception of fairness (ß = -.451, p <.001) significantly predicted withdrawal intentions. Thus, as applicants' perception of fairness increases by 1 unit, withdrawal intentions decrease by -.451, t = -.435, p <.001. Hence, hypothesis 1a is supported where applicants' perception of fairness towards AVIs is a significant predictor of applicants' withdrawal intentions. Conversely, applicants' perception of favourability (ß = -.130, p = .21) did not significantly predict their withdrawal intentions. Hence, hypothesis 2a is not supported.

Predictors	B	SE (B)	ß	t
1. Applicants' perception of fairness	- 0.51	0.012	-0.451	- 4.35***
2. Applicants' perception of favourability	- 0.13	0.10	-0.130	- 1.25

Note. ***$p <.001$

TABLE 3: Summary of multiple regression analysis for applicant perception of fairness and favourability towards AVIs as predictors of withdrawal intentions.

Hypothesis 1b and 2b predicted that applicants' perception of fairness and favourability towards AVIs significantly predicted applicants' recommendation intentions. By using multiple regression, the results (see Table 4) show that a significant model emerged, R = .73, r^2 = .53, F (2,116) = 64.50, $p <.001$. It was found that applicants' perception of fairness (ß = .58, $p <.001$) and favourability (ß = .20, $p =.02$) significantly predicted their recommendation intentions. Thus, as applicants' perception of fairness increases by 1 unit, recommendation intentions increase by .580, t = 6.81, $p <.001$ and as applicants' perception of favourability increases by 1 unit, recommendation intentions increase by .197, t = 2.32, $p <.05$. Hence, both hypothesis 1b and 2b is supported where applicants' perception of fairness and favourability towards AVIs are significant predictors of applicants' recommendation intentions.

Predictors	B	SE (B)	ß	t
1. Applicants' perception of fairness	0.078	0.011	0.580	6.81***
2. Applicants' perception of favourability	0.023	0.010	0.197	2.32*

Note. ***$p <.001$; *$p <.05$

TABLE 4: Summary of multiple regression analysis for applicant perception of fairness and favourability towards AVIs as predictors of recommendation intentions.

Hypothesis 1c and 2c predicted that applicants' perception of fairness and favourability towards AVIs significantly predicted applicants' perceived procedure performance. By using multiple regression, the results (see Table 5) show that a significant model emerged, R = .71, r^2 = .50, F (2,116) = 57.83, $p <.001$. It was found that applicants' perception of fairness (ß = .59, $p <.001$) significantly predicted their perceived procedure performance. Thus, as applicants' perception of fairness increases by 1 unit, perceived procedure performance increase by .588, t = 6.72, $p <.001$. Hence hypothesis 1c is supported where applicants' perception of fairness towards AVIs is a significant predictor of applicants' perceived procedure performance. Conversely, applicants' perception of favourability (ß = .163, $p = .06$) did not significantly predict their perceived procedure performance. Hence, hypothesis 2c is not supported.

Predictors	B	SE (B)	ß	t
1. Applicants' perception of fairness	0.148	0.022	0.588	6.718***
2. Applicants' perception of favourability	0.036	0.019	0.163	1.861

Note. ***$p <.001$

TABLE 5: Summary of multiple regression analysis for applicant perception of fairness and favourability towards AVIs as predictors of perceived procedure performance.

5.2 Moderation Analysis

To examine the moderation effects of culture on applicants' perception of fairness and favourability towards AVIs and behavioural outcomes, Hayes (2012) PROCESS macro was conducted.

Perception of Fairness - Recommendation Intentions as Moderated by Culture. Results showed that the overall model of applicants' perception of fairness on recommendation intentions moderated by culture was significant, $F_{(3,115)} = 33.55$, $p < .001$, $R^2 = .51$. As for individual predictors, culture was found not significant $b = .16$, $t_{(115)} = 1.38$, $p = .17$ whereas applicants' perception of fairness was significant, $b = .10$, $t_{(115)} = 9.96$, $p < .001$ on recommendation intentions. The interaction effect was found to be non-significant, $b = -.01$, $t_{(115)} = -.48$, $p = .63$. Thus, this confirms that culture does not moderate the relationship between applicants' perception of fairness towards AVIs and recommendation intentions (see Table 6).

Perception of Fairness - Withdrawal Intentions as Moderated by Culture. Results showed that the overall model of applicants' perception of fairness on withdrawal intentions moderated by culture was significant, $F_{(3,115)} = 11.47$, $p < .001$, $R^2 = .30$. As for individual predictors, culture was found not significant $b = .12$, $t_{(115)} = .98$, $p = .33$ whereas applicants' perception of fairness was found to be negatively significant, $b = -.06$, $t_{(115)} = -5.19$, $p < .001$ on withdrawal intentions. The interaction effect was found to be non-significant, $b = -.02$, $t_{(115)} = -.65$, $p = .52$. Thus, this confirms that culture does not moderate the relationship between applicants' perception of fairness towards AVIs and withdrawal intentions (see Table 6).

Perception of Fairness - Perceived Procedure Performance as Moderated by Culture. Results showed that the overall model of applicants' perception of fairness on perceived procedure performance moderated by culture was significant, $F_{(3,115)} = 36.20$, $p < .001$, $R^2 = .49$. As for individual predictors, culture was found not significant $b = -.013$, $t_{(115)} = -.06$, $p = .95$ whereas applicants' perception of fairness was significant, $b = .148$, $t_{(115)} = 2.91$, $p < .005$ on perceived procedure performance. The interaction effect was found to be non-significant, $b = 0.20$, $t_{(115)} = .55$, $p = .59$. Thus, this confirms that culture does not moderate the relationship between applicants' perception of fairness towards AVIs and perceived procedure performance (see Table 6).

Outcomes	coeff	se	*t*	*p (*LLCI, ULCI)
1. Withdrawal intentions	-0.015	0.023	-0.65	0.520 (-0.0609, 0.0310)
2. Recommendation intentions	-0.009	0.019	-0.48	0.629 (-0.0474, 0.0288)
3. Perceived procedure performance	0.195	0.036	0.55	0.586 (-0.0513, 0.0902)

Note. Moderator: Individualists-Collectivists

TABLE 6: Summary of moderation model of culture differences on applicant perception of fairness on behavioural outcomes.

Perception of Favourability - Recommendation Intentions as Moderated by Culture. Results showed that the overall model of applicants' perception of favourability on recommendation intentions moderated by culture was significant, $F_{(3,115)} = 24.84$, $p < .001$, $R^2 = .35$ As for individual predictors, culture was found not significant $b = -.21$, $t_{(115)} = -1.65$, $p = .10$ whereas applicants' perception of favourability was significant, $b = .07$, $t_{(115)} = 8.08$, $p < .001$ on recommendation intentions. The interaction effect was found to be non-significant, $b = .01$, $t_{(115)} = .50$, $p = .61$. Thus, this confirms that culture does not moderate the relationship between applicants' perception of favourability towards AVIs and recommendation intentions (see Table 7).

Perception of Favourability - Withdrawal Intentions as Moderated by Culture. Results showed that the overall model of applicants' perception of favourability on withdrawal intentions moderated by culture was significant, $F(3,115) = 8.50$, $p < .001$, $R^2 = .26$. As for individual predictors, culture was found significant $b = .39$, $t(115) = 2.81$, $p = .006$ and applicants' perception of favourability was found to be negatively significant, $b = -.05$, $t(115) = -4.45$, $p < .001$ on withdrawal intentions. However, the interaction effect was found to be non-significant, $b = -.03$, $t(115) = -1.31$, $p = .19$. Thus, this confirms that culture does not moderate the relationship between applicants' perception of favourability towards AVIs and withdrawal intentions (see Table 7).

Perception of Favourability - Perceived Procedure Performance as Moderated by culture. Results showed that the overall model of applicants' perception of favourability on perceived procedure performance moderated by culture was significant, $F(3,115) = 23.33$, $p < .001$, $R^2 = .38$. As for individual predictors, culture was found significant $b = -.76$, $t(115) = -3.00$, $p = .003$ and applicants' perception of favourability was not significant, $b = .01$, $t(115) = .28$, $p = .78$ on perceived procedure performance. The interaction effect was also significant at, $b = .09$, $t(115) = 2.47$, $p = .015$. Thus, this confirms that culture does moderate the relationship between applicants' perception of favourability towards AVIs and perceived procedure performance (see Table 7). As a follow-up analysis, an interaction plot was plotted (see Figure 2).

	Outcomes	coeff	se	t	p (LLCI, ULCI)
1.	Withdrawal intentions	-0.032	0.024	-1.31	0.194 (-0.0794, 0.0163)
2.	Recommendation intentions	0.009	0.017	0.50	0.616 (-0.0254, 0.0427)
3.	Perceived procedure performance	0.0883	0.036	2.47	0.015 (0.0175, 0.1590)

Note. Moderator: Individualists-Collectivists

TABLE 7: Summary of moderation model of culture differences on applicant perception of favourability on behavioural outcomes.
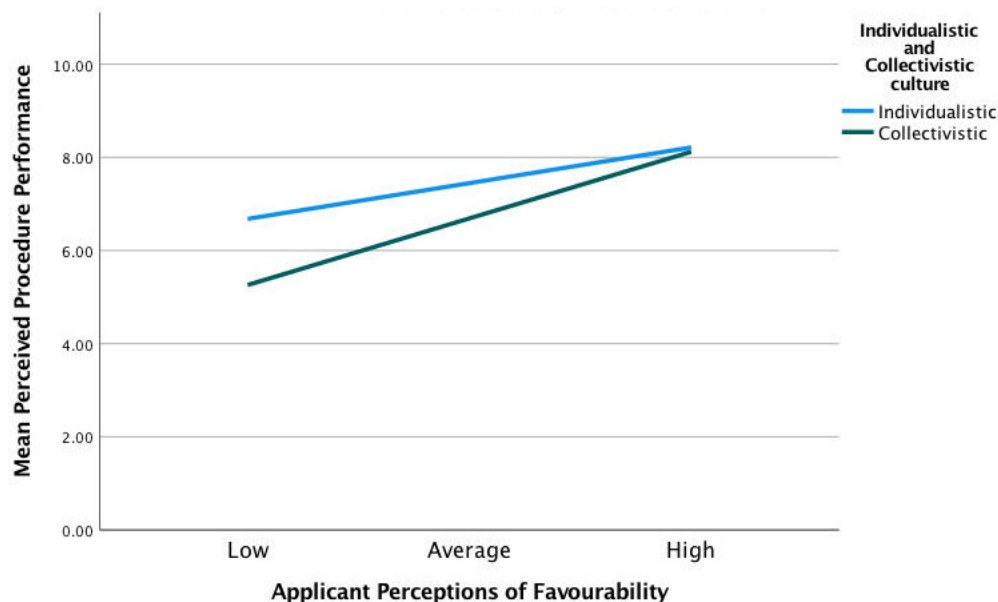

FIGURE 2: Applicants' perception of favourability and culture interaction in predicting perceived procedure performance.

As seen in the graph Figure 2 above, it was predicted that at lower levels of perception of favourability, individualists tend to have higher perceived procedure performance than collectivist. These cultural differences reduce as the perception of favourability increases. Specifically, both individualistic culture b = .102, t (115) = 5.23, p <.001 and collectivistic culture b = .190, t (115) = 6.36, p <.001 significantly moderate the relationship between applicants' perception of favourability and their perceived procedure performance. All in all, culture only moderates applicants' perception of favourability towards AVIs and their perceived procedure performance. Culture did not moderate the relationship between applicants' perception of fairness towards AVIs and their behavioural outcomes as well as applicants' perception of favourability and their recommendation and withdrawal intentions.

6. DISCUSSION

The present study is aimed to ascertain whether applicants' reaction (i.e. perception of fairness and favourability) towards AVIs predict applicants' behavioural outcomes (i.e. recommendation intentions, perceived procedure performance and withdrawal intentions) as well as to investigate to what extent culture moderates these relationships. Findings from this study showed that applicants' perception of fairness towards AVIs is a significant positive predictor for recommendation intentions and perceived procedure performance, whereas withdrawal intentions, on the other hand, were found to have a significant negative prediction. Applicants' perception of favourability towards AVIs were found to be non-significant for withdrawal intentions and perceived procedure perception however, there is a significant positive predictor for recommendation intentions. It was found that the higher the applicant favourability towards AVIs were, the higher the applicants' intentions of recommending the organisation to others. The study also investigated if culture moderates applicants' perception of fairness and favourability on their behavioural outcomes, however the findings showed that culture did not moderate any of the above relationships except for applicants' perception of favourability towards AVIs and their perceived procedure performance.

Consistent with Gilliland's (1993) organizational justice theory framework (Truxilloet al., 2017) this study provided support for the notion that applicants' perception of fairness towards AVIs significantly predicted applicants' behavioural outcomes such as recommendation intentions, withdrawal intentions and perceived procedure performance. Specifically, higher perception of the AVIs as a fair selection tool predicted higher recommendation intentions, higher perceived procedure performance and lower withdrawal intentions among the applicants. This suggests that applicants who viewed the AVIs selection process as fair, were more likely to recommend the organisation to others, believe they had performed well and were less likely to withdraw from the process. While past research, utilizing non-applicants, has shown that positive applicant experiences are associated with enhanced recommendation intentions, organisational attractiveness and lower withdrawal intentions (Hunthausen, 2000; Ryan et al., 2000; & Konradt et al., 2013), the present study, utilizing actual job applicants, strengthens the evidence that applicants' reaction does predict their behavioural outcomes. This comparable result, indicates that the use of non-applicants as participants do indeed reflect the perceptions and behaviours of actual job applicants.

The findings of this study are also in line with Toldi's (2011) prediction that higher perception of favourability towards AVIs predicted higher recommendation intentions. On the contrary, the finding of this study found that applicants' perception of favourability did not significantly predict withdrawal intentions and perceived procedure performance. When a simple regression was conducted, applicants' perception of favourability towards AVIs significantly predicted both withdrawal intentions (ß = -.43, t = -5.12, p <.001) and perceived procedure performance (ß = .55, t = 7.16, p <.001). However, when a multiple regression (see Table 3 and 5 above) was conducted, although the overall model remains significant, these individual predictors and their behavioural outcomes vanished. As such, further analysis was conducted and it was found that

applicants' perception of fairness and favourability tends to increase together with a correlation of r = 0.66. Hence, when we look at the relationship between applicants' perception of favourability with withdrawal intentions and perceived procedure performance while holding applicants' perception of fairness constant, the relationship disappeared. This may be because when applicant perceive the selection process of utilising AVIs is fair, their perception of favourability towards AVIs increases together as well. While past studies have mainly focused on applicants' reaction based on organisational justice theory (Hunthausen, 2000; Ryan et al., 2000; & Konradt et al., 2013), these findings provide novel evidence that applicants' perception of favourability are highly correlated with their perception of fairness and their behavioural outcomes. Yet, there are still limited theories that explains this relationship. Therefore, future research should consider studying this perspective of applicants' reaction.

A major focus of this study was to provide evidence regarding cross-cultural differences (i.e. individualistic-collectivistic) on applicants' reaction towards AVIs and their behavioural outcomes. The results indicated that the ability of applicants' perception of fairness and favourability to predict both recommendation intentions and withdrawal intentions did not depend on cultural-level influences. This suggests that when applicants believe that the AVIs selection process is fair and have a positive feeling towards the process, they would be more likely to recommend the organisation to others and less likely to withdraw from the process regardless of whether the individual is of an individualistic or collectivistic culture. Similarly, this study demonstrated that there is no relationship between applicants' perception of fairness towards AVIs with culture in predicting applicants' perceived procedure performance. This shows that culture did not strengthen or weaken the relationship between applicants' perception of fairness towards AVIs and their perceived procedure performance. These findings suggest that individualistic and collectivistic culture did not moderate applicants' perception of fairness towards AVIs in predicting their behavioural outcomes. Applicants' perception of favourability towards AVIs were moderated by culture for perceived procedure performance but not for recommendation and withdrawal intentions. Examination of the interaction plot demonstrated that although higher levels of perception of favourability predicted higher levels of perceived procedure performance for both individualists and collectivists, certain differences exist as seen in the graph Figure 2 above. At lower levels of perception of favourability, individualists tend to have higher perceived procedure performance than collectivist and these perceptions due to cultural differences gradually reduces as perception of favourability increases. This is due to individuals from individualistic societies being more achievement-oriented as they believe that they have to prove their worth by placing greater value on demonstrating their skills, abilities and achievements (Ryan et al., 2009); and also believe that they have control over the environment in achieving their goals (Trompenaars & Hampden-Turner, 1998). Therefore, even if they do not favour AVIs, their characteristics will motivate them to make an effort to excel in the interview in contrast to collectivists. Hence, this may be one of the reasons why culture has an interaction effect on applicants' perception of favourability in predicting their perceived procedure performance. This study findings also contributes in building on existing research on the knowledge of moderators on the effect of applicants' perceptions on their behavioural outcomes towards AVIs in which different cultural-levels (i.e. individualistic-collectivistic) manifest.

6.1 Theoretical and Practical Implications
The findings of this study hold various implications. First, this study has provided a better understanding regarding applicants' reaction and behavioural outcomes with the justice theory. This study findings supported the notion that positive applicants' perception of fairness in technology-based interviews predicted positive behavioural outcomes which includes lower intentions to withdraw from the interview process, more likely to recommend the organisation to others, and increase perceived procedure performance. This is in line with the justice theory and past researches that had examined perception of fairness of traditional selection processes (i.e. face-to-face interviews and behavioural outcomes). Therefore, this provides additional evidence to the current applicants' reaction literature.

Additionally, the present study looked at other aspects of applicants' reaction (i.e. perception of favourability) to study if this perception had similar effects as the justice theory in predicting behavioural outcomes. Interestingly, the findings demonstrated that perception of favourability towards AVIs while holding perception of fairness constant, did not predict applicants' withdrawal intentions and perceived procedure performance. However, applicants' perception of fairness and favourability are both positively correlated with recommendation intentions. Thus, as applicants' perception of favourability and fairness of the selection process increases, this resulted a significant relationship with applicants' intention to recommend the organisation to others. This demonstrated that organisations that uses technology-based interviewing platforms, specifically AVIs will need to cater for fairness of the selection process as applicants' perception of fairness increases with applicants' perception of favourability. As such, organisations should be certain that applicants do not only fully understand how AVIs function, but also how AVIs fits into the selection process. Hence, employers can take precautionary steps by informing applicants about the process and how the information will be used to increase applicants' perception of fairness of the process. Moreover, it was found that applicants who favours the selection process (i.e. AVIs) are likely to recommend the organisation to others.

While the current research provides evidence on applicants' perception and their behavioural outcomes, this area of research is still nascent. Therefore, future studies could explore this area in more detail covering a wider scope or to replicate the study to check the consistency of the results. The findings show that culture does not moderate applicants' reaction towards AVIs on any behavioural outcomes (with the exception of perceived procedure performance), indicates that organisations can adopt AVIs to recruit candidates globally because there is no significant relationship between these two aspects. More specifically, this study suggests that AVIs perform fairly in the selection process for global recruitment because it eliminates the assumption of cultural biases moderating the relationship of applicants' reaction and behavioural outcomes in the selection process (5 out of the 6 relationships measured indicated no cultural differences). The effect of culture in moderating selection fairness and favourability perceptions and behavioural outcomes is small, global organisations may not need to tailor their selection procedures specifically to meet the needs of applicants in different countries. Although the study found that culture does affect the strength of the relationship between applicants' perception of favourability and their perceived procedure performance, the cultural effect decreases as the applicants' perception of favourability increases. Findings showed that there were minimal differences between individualist and collectivists on their perceived procedure performance when their perception of favourability is high. Therefore, organisations can consider taking precautions (e.g. ensure the entire video interview process provide positive experience for the applicant) to minimise the perception of cultural differences, the extent possible.

6.2 Limitations and Future Research Recommendations

There are limitations to this study that should be highlighted. Firstly, the present study did not examine the applicant job positions or level of management, type of jobs or job profiles and industry the applicant is applying to. In order to further explore the patterns found in this study, it will be beneficial for future research aiming to replicate the present study to include a larger sample size and to focus on applicant's managerial responsibilities, types of jobs, different applicant's job profiles and industry. This is because there is a possibility that AVIs are favoured for entry-level positions that does not require hands-on demonstration but possibly not for upper level management positions that require other competencies such as stakeholder management, networking, impact and influence etc. (Guchait et al., 2014) which would be difficult to measure using AVIs. Also, future studies may consider exploring the fairness and favourability of AVIs as a selection tool in different industry job application, as there is a possibility that in industries where technical competencies are critical such as hiring of technicians in a manufacturing industry may view AVIs as a selection tool unfavourably or unfair as AVIs limit their ability to demonstrate their technical skills.

Secondly, the study of the impact of culture on applicants' perception of fairness and favourability premise on the individualism-collectivism dimension at a country level might not capture all the applicants' cultural differences on their reaction. In order to further explore the patterns found in this study regarding culture as a moderating variable, it will be beneficial for scholars to explore other constructs and other notable cultural differences that would further support this area of studies. Gelfand et al., (2007) also asserted that the unpacking of cultural differences in an organisational psychology context, researchers need to move beyond the focus of individualism-collectivism, through studying the nature of roles, strength of social norms and beliefs about social and physical world. Thus, future research should consider the impact of culture as discussed in the present study in more detail by incorporating the emic and etic value of the culture (Wang et al., 2012).

Lastly, future research could consider exploring this area of research from a qualitative perspective (e.g. using open-ended questionnaires or interviews). Since AVIs are a novel tool in the selection process, applicants' feedback may provide valuable insights to organisations regarding the use of this new selection tool. For example, a survey conducted by Toldi (2011) found that some applicants are still unfamiliar with using webcams. There is a possibility that applicants who feel unfamiliar and nervous with webcams, may feel the selection process is unfair and unfavourable and thus drop out from the process. Besides that, considering the changing nature of selection process as well as the impact of technology in the 21st century on employee recruitment and selection, there is a need for new studies on applicants' reaction on selection methodology in this digital age.

7. CONCLUSION
In conclusion, the present study has examined cross-cultural applicant reactions towards AVIs and their behavioural outcomes. The present study also demonstrated that when applicants believe technology-based interviewing selection process is procedurally fair and are more open towards it, the results showed positive applicants' behavioural outcome, specifically on their recommendation intentions, perceived procedure performance and lower withdrawal intentions. The study also found that there are no significant relationships between applicants' favourability towards technology-based interviewing selection process on any of the behavioural outcomes (with the exception of recommendation intentions). Additionally, this study suggests that culture did not moderate applicants' perception of fairness and favourability towards AVIs on any the behavioural outcomes (with the exception of applicants' perception of favourability towards AVIs on their perceived procedure performance).

Although culture moderated applicants' perception of favourability towards AVIs and their perceived procedure performance, the findings showed that individualists and collectivists have similar perceived procedure performance when there is high perception of favourability towards AVIs (applicants' cultural differences on their reaction reduces).Therefore, organisations can continue to embrace AVIs in their selection and recruitment process while keeping in mind that they will have to establish a fair and favourable AVIs selection process, as an unfavourable and unfair selection process may lead to negative behavioural outcomes. Since job applicants are mostly geographically dispersed and most organisations are starting to hire from abroad and adopt AVIs as their selection tool, hence the study in this area makes a valuable contribution to the personnel selection literature.

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Team Based Gainsharing Program Implementation In A Polycarbonate Lens Factory Indonesia

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Abstract

Manufacturing factories often use gainsharing (collective performance rewards to incentivize their employees) as a tool to improve performance measures and goals. In this study, a team-based gainsharing program was adopted by a polycarbonate lens manufacturing company to meet its objective of increasing productivity and improving profitability in Indonesia. To test the effectiveness of a gainsharing program in improving Key Performance Indicators (KPI), a quantitative method is used for collecting and trending KPI results against gainsharing payouts. The KPI and calculation of gainsharing payout was set by the factory management. Data from the factory was collected and tabled on a monthly basis for a period of six (6) years. The early stages of the study were met with challenges and the initial outcome was not receptive. The criteria and incentives in the program were then re-evaluated and revised with total buy-in and active participation from the management. Empowerment and team-based training, outbound team outings, conflict resolution workshops with internal and external stakeholders were conducted. The hypothesis was proven correct where gainsharing did have a positive impact on meeting KPIs. In meeting the improved KPIs, the gainshare amount from the program was paid out. The findings support earlier studies. The changes made, in the context of a collectivist society, were the percentage payouts which were different for departments were merged into one single payout for all. This study confirmed when there is a good alignment between gainsharing and performance measures put in place, the gainsharing program could succeed. The collectivist element consideration, clear communication, stakeholders' involvement, and the factory management willingness to do some tweaking and revision to the gainsharing program made this study a success. The factory management enjoyed the benefits of gainsharing; it was able to attract and retain talents and its gross margin grew by 87%.

Keywords: Gainsharing, Key Performance Index, Lens Manufacturing, Indonesia.

1. INTRODUCTION

A gainsharing plan is a type of management scheme that a firm utilizes to increase profitability by increasing the employees' financial and emotional stake in the success of the business (Gordon, 2021). It involves offering employees financial shares of the business gains from improved performance to motivate them to perform better. A gainsharing plan directly equates employee earnings with performance and as such, is an effective instrument in boosting performance and

motivation levels (Gordon, 2021). Companies usually have choices among various compensation plans and decide which is most effective for their situation. Incentive systems in organizations are usually divided into two categories on the basis of the unit of analysis, for example, merit-based compensation, piece-rate incentive programs (where people are paid according to the quantity of output), bonus and commissions and the recipient of the reward; whether it is individual or a group (Black et al., 2020).

Several studies have shown the effectiveness of gainsharing incentives in meeting performance goals and a tool for performance improvement. The earlier studies Zondo (2017) and Benson and Sajjadiani (2018) recommended factories to review gainsharing plans as they did not turn out as well as expected. Earlier studies did not mention if after the gainsharing was implemented, and if the KPIs were not met, what revisions and changes that could be made to the KPI or to Gainsharing to achieve better results during the duration of the study. However, there is a knowledge gap where it is not really known how KPI can improve with gainsharing program implementation. This is of importance because performance goals are measured using KPI. So, the research question that we would like to answer is: When a gainsharing program is adopted, does the program's strategic KPI improve?

The gainsharing program focused on this research was adapted by a polycarbonate lens factory after fire broke out on their manufacturing premises. The key requirements where various KPIs were identified namely achieving budget operating profits, Acceptable Outgoing Quality Level (AOQL), delivery on time, reduction of back-orders, yields and continuous improvement program. A qualitative method was used for this study where the results of KPI and gainsharing achievement was collected from factory management. With the cooperation of the polycarbonate factory management, the gainsharing plan would take place over six years and this study planned to document the tweaking (minor changes) made by the factory management, if needed, to improve their results. From a management perspective, this was important to manufacturing to make changes promptly when needed.

The hypothesis of this study was how a gainsharing program would improve KPI. The results proved the hypothesis was true, after some tweaking of the KPI requirement and gainsharing program performed by the factory management. The factory enjoyed good growth because their KPIs were met, and their employees benefited from the gainsharing program. This showed that the gainsharing program was effective in a collectivist society provided it was one common percentage payout for all employees. Implications for this study was gainsharing program could be used in other manufacturing plants in collectivist societies, rather than individualist societies, as this study showed the merging of one payout for all employees which is not an individualist trait. Future research could deploy a quantitative method to study in-depth the relationship between gainsharing and KPI.

2. LITERATURE BACKGROUND
2.1 Rewards System and Gainsharing
Rewards systems along with performance management are key levers used to motivate and drive individual and group performance (Black et al., 2020). Long and Shields (2010) stated that the reason why monetary rewards could be a powerful motivator and could help to attract and retain top performers was because they helped meet a variety basic need (e.g., food, accommodation) and higher level of needs (e.g., belonging to a group, respect from others, achieving mastery in one's work). Other than a powerful motivator, it translated to other positive outcomes such as employee retention (Aguinis et al., 2012) which subsequently lowered time and money spent in training new workers (Gordon, 2021).

Reward systems could incorporate multiple components where some delivered equal rewards within the team, others delivered rewards equitably, for example, an organization would pay an employee his/her pay package including individual effort rewards, equally allocated team-based bonuses and equally paid reward from gainsharing based on plant's productivity (DeMatteo et al., 1998). This was not just found in the United States of America, but also China, Australia, and England (Aguinis et al, 2012). The highest objective improvements were found in employees given monetary intervention programs compared to those who received social recognition and performance feedback (Aguinis et al., 2012).

Gainsharing is one of the several types of team-based rewards. Gainsharing is best described as a management system in which an organization sought higher levels of performance through the involvement and participation of its people (HR Guide, 2015). As performance improves, employees share financially in the gain where all employees at site or operation are included (HR Guide, 2015). Gainsharing is tied with pay for performance, encourages group cooperation and is plans that focus exclusively on productivity (Black et al., 2020).

Team financial incentives were commonly used to improve performance by motivating groups of employees and team-based reward strategies might be the first response as work most often needs to go through different hands to complete (Sciacovelli, 2018). Group incentive program overcome shortcomings of individual incentive program because it encouraged employees to cooperate with one another and with the corporation so that all employees could benefit (Black et al., 2020). Through a meta-analysis of 30 studies involving more than 7,000 teams, it was found that team-based rewards yield moderate positive effects on team performance (Garbers and Konradt, 2014). Team incentives would likely to be effective for teams with clear measurable goals and it was important that teams would be able to influence the criteria they would be evaluated on (DeMatteo et al.,1998). It would also be effective on teams with permanent assignments and/or whose work would continue for longer periods of time (DeMatteo et al.,1998).

Capital investment plays a role in labor productivity improvement, where companies that have invested capital (after the implementation of a gainsharing program) experienced improvement in labor productivity (Zondo, 2017). Gainsharing fosters a culture of continuous improvement (HR Guide, 2015) aimed by lean manufacturing philosophy (Cortes et al., 2016). Where companies adopt a holistic approach to continuous improvement, inefficient work practices will be filtered out of administrative systems, and production and support systems would become more streamlined and efficient (Chapman et al., 1997). Improvement in labor productivity ratios will reflect such system improvements (Chapman et al., 1997). Success of team-based rewards also depended on other organizational interventions introduced concurrently with team rewards, for example, employee involvement and International Standard Organization standard implementation (DeMatteo et al., 1998). In addition, gainsharing worked best when company performance levels could be easily quantified (HR Guide, 2015).

A good alignment between monetary rewards and performance allows organizations to attract and retain high performance individuals (Rynes et al., 2004). Several papers have shown gainsharing often accompanied other engagement programs as complements such as total quality management or Six Sigma. Therefore, within manufacturing, gainsharing plans were most commonly used by plants using team production because monitoring workers individually was challenging (Benson &Sajjadiani, 2018; Drago & Heywood, 1995; Weitzman & Kruse, 1990). The guidelines for implementing incentive programs effectively had been tabled by several studies; Black et al. (2020), Kretzschmar and Magno (2016) and Aguinis et al., (2012):

1) Define and measure performance accurately;
2) Make rewards contingent on performance (and consider individualism-collectivism culture norms);

3) Reward employees in timely manner;
4) Main justice in the reward system;
5) Use monetary and non-monetary rewards.

Performance was measured across departments and units where measures were commonly narrower and controllable by employees and the bonus was often paid as an equal percentage of compensation or cents per hours worked, rather than basis of individual performance, and a supporting employee involvement system would drive improvement initiatives (Kretzschmar &Magno, 2016).

Successful gainshare programs include all stakeholders' involvement, maintaining transparency and ensuring the plan's goals are in line with the organization goals (Roy &Dugal, 2005). Payouts could be based on the performance of plants, teams, or small work units (Gross & Duncan 1998). The gainsharing plan review board should consist of managers and department leaders who oversee and guide the process, develop measures, approve ideas, and monitor the plan's progress (Kretzschmar &Magno, 2016) as gainsharing programs success requires management commitment, training, and frequent and ongoing communications (HR Guide, 2015).

2.2 Key Performance Index and Organizational Factors

KPIs are metrics used by organizations to track success and guide their progress towards specific strategic objectives. It is important to consider corporate culture because it is a direct connection between organizational culture and performance whereby each specific feature impacts the strategy's implementation (Villazon et al., 2020). Several descriptions of KPIS have been discussed. Villazon et al. (2020) summarized the KPI categories into financial, strategic, tactic, project, lifestyle, safety, and sustainability. In a production point of view, the five strategic KPIs categories are cost, quality, flexibility, stock, and lead time (Cortes et al., 2016). The process of developing KPI metrics started with an input (of requirements and statements) symbolized as X, provided by a stakeholder (customer or supplier) to deliver outputs (delivery on time) symbolized by Y to customers (Oguz et al., 2012). This was shown in Figure 1.
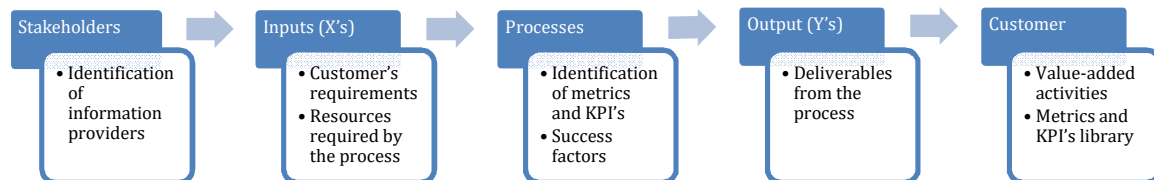

FIGURE 1: KPI metrics development process.

Several studies have shown gainsharing rewards can help companies in achieving sustained improvement in performance measures. In one study, about 81% of companies reported success in gainsharing plans (Black et al., 2020). In a study of the automotive parts industry in South Africa, it was established that gainsharing improved productivity and reduced spoilage and absenteeism rates (Zondo, 2017). In the Ameri Steel USA study, its gainsharing demonstrated the effectiveness of using incentives to improve productivity within an organization; where the company generated an average of 8% annual improvements for four years, and the employees enjoyed average payouts equal to 46% if their base pay (Gross & Dunce, 1998).

It was found productivity rose by 18% after a garment manufacturer implemented a gainsharing plan (Hamilton et al., 2003). Gainsharing has been associated with greater productivity and lower absenteeism (Benson &Sajjadiani, 2018). In another study on gainsharing rewards based on

meeting product quality and worker engagement, quality did not statistically improve when workers were informed that they were eligible for quality bonuses; rather there was an increase in items returned to plant citing quality reasons (Benson &Sajjadiani, 2018). The workers, however, submitted more continuous improvement cards and the plant never missed total worker engagement target in quarters the plant was bonus eligible which showed gainsharing worked for continuous improvement (Benson &Sajjadiani, 2018). This study concluded while gainsharing was effective on worker engagement, it was not effective for product quality improvement, which was more important for organization.

In a study that analyzed the behavioral consequences of employee psychological involvement in gainsharing, it was found that employee gainsharing satisfaction was positively related to organizational citizenship behavior (Rhee & Welbourne, 2006). This was important as individuals engaged in organizational citizenship behavior can prevent problems, fit into groups, suggest ideas, and help one another beyond one's job description, which in turn increases the possibility of achieving performance goals (Rhee & Welbourne, 2006). However, gainsharing rewards, just like any other monetary rewards, do not automatically improve employees' job-relevant knowledge, skills, and abilities (Aguinis et al., 2012). As gainsharing is focused on productivity, it may lead employees to ignore other important objectives such as quality (Black et al., 2020). Gainsharing plans might also be resisted by unions, which prefer compensation to be based on seniority or job classification (Black et al., 2020).

For organizations that expand overseas, usually from a developed country to a less developed country (usually a collectivist society), with reasons of lowering production costing and increasing productivity, the transfer of knowledge became critical. In a collectivist society, there is a high preference for a strongly defined social framework in which individuals are expected to conform to the ideals in-groups to which they belong (Hofstede Insight, 2018). Organization challenges might surface from the need to change from an individualist to a collectivist nature working environment; and adapting incentive programs to be effective and relevant to local culture (Hofstede Insight, 2018).

Monetary reward systems that emphasize individual rewards is more successful in an individualistic society and the greater an organization's collectivist nature the greater the emphasis should be on rewarding team performance where differentiation among team members is reduced in addition to rewarding individual performance (Aguinis et al., 2012; DeMatteo et al.,1998). When delivering performance feedback in a collectivist society, it is recommended to use non-confrontational language and preferably in informal settings (Aguinis et al., 2012).

In Hermawan's (2005) study on employees' job satisfaction and rewards in chemical manufacturing in Indonesia, it was found that motivational initiatives were more effective when they formalized Standard Operating Procedures in the factory. Total Quality Management was not formally applied, but with safety meetings and safety talks; and employees who performed above the average were rewarded and under-performers would undergo training. Workers perceived that their reward was based on their skill, when they performed well and when their team performed well and perceived the production department as the heart of the company and predominantly determined the company output and quality. A minority felt team-based performance was an important factor despite annual individual appraisal and they also welcomed non-financial recognition (Hermawan, 2005). In Indonesia, it was observed that the lump sum payment during the month of Ramadan and end of financial fiscal year incentives were not sufficient to motivate the employees to give their best to the organization thus, a monthly gain share program was introduced, to encourage employees to go beyond their normal work routines give something extra and also get instant monetary returns the following month (Gordon, 2021).

Members influence, interact and share information and offer ideas for new and improved ways. A team climate is created to assimilate knowledge, develop common knowledge base and has the capacity to solve problems (Lakshinarasimha, 2017). Members are internal customers to one another, often matter more than external customers as one needed everyone in the organization for support in order to succeed and so one had to pay attention to internal customers (Peters, 2009). Participation increases productivity and thus causes financial success (Fadal, 2004). Team participation contributes to employee empowerment to function effectively (Lakshinarasimha, 2017). Empowerment is widely accepted as a potent way to enhance job performance and job satisfaction (Conger and Kanungo, 1988). Employee empowerment along with ethics, organization support and top management commitment directly contribute to job satisfaction (Lakshinarasimha, 2017). Empowerment has a positive influence on job satisfaction and organizational commitment (Chinomona, 2017). Gainsharing plans benefits businesses by fostering better employee engagement in the production process and ensuring higher quality of work (Gordon, 2021).

Setting of employee performance criteria and employees reward criteria rest on the leadership style of the organization as according to Peshawaria (2011), true leaders undertake the journey itself where the reward in the end was only the icing of the cake; and navigating all the obstacles and finding a way to succeed need huge amounts of energy; because the leaders need to be active in leading the implementation of any program. One needs to first find one's own personal sources of energy, renew it regularly and then mobilize the energy to others (Peshawaria, 2011). To energize self, one needs to define purpose and values; then enlist co-leaders and address their expectations of their role, environment and prospects for growth and development as shown in Figure 1 (Peshawaria, 2011). The third stage is to galvanize the enterprise with the leader setting the direction, design the organization, and create a culture of excellence. This is summarized as a leader's tool kit (Peshawaria, 2011).
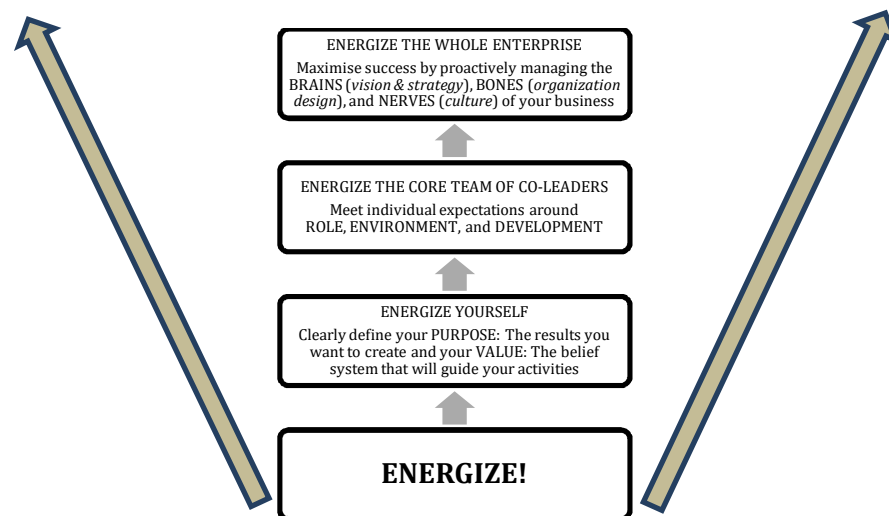
FIGURE 2: A leader's tool kit (Peshawaria, 2011).

In contrast, the dysfunctions of a team should be identified, as its presence could hamper management efforts to reward employees. According to Lencioni (2002), there are five dysfunctions. The first dysfunction is the absence of trust because trust is needed where peers are comfortable with each other about their mistakes, fears, and behaviors. The second dysfunction is fear of conflict where team members do not hesitate to disagree with, challenge and question one another, all in the spirit of finding the best answers and making great decisions.

The third dysfunction is a lack of commitment because genuine buy-in of important decisions takes place where all opinions are considered giving confidence to team members. The fourth dysfunction is avoidance of accountability which takes place where team members do not hold one another accountable adhering to those decisions and standards and only rely on their leaders as source of accountability and not one another. The avoidance of accountability is often subtle between peers because one deems another equal and does not feel it appropriate to tell another how to do their job. The buy-in from all members is important as plans will fail during execution as some might say "I never agree to it anyway." The fifth dysfunction is inattention to results where collective results that define team success are sidelined due to individual agendas or ego-driven status. Leaders need to exercise trust, remove fear of conflict, be committed, accountable and be collective in their stance on agreeing to the rewards program and payouts calculations (Lencioni, 2002).

Understanding organizational health is critical for introducing a gainsharing reward program to a big manufacturing company. There were three biases that leaders need to watch out for – the sophisticated bias, adrenaline bias and quantification bias. The sophistication bias was about keeping it simple and straightforward which many educated managers find it difficult to embrace while the adrenaline bias was about leaders needing to be mindful of adrenaline bias, not afraid of slowing down and deal with critical issues in an un-urgent way. Quantification bias was a hindrance for overly analytical leaders to accept based on conviction and intuition level (Lencioni, 2012). A good health organization showed signs of minimal politics and confusion, high degree of morale and productivity and very low turnover among good employees (Lencioni, 2012). Stakeholder concept is important for an organization to grow. In Toyota, their guiding principle was to contribute to the economic growth of the country in which it was located (external stakeholders) and contributed to the stability and well-being of team members (internal stakeholders) (Liker, 2004). An effective stakeholders concept would result in stakeholders being more cooperative and thus more likely to reveal information that could further increase the organization's value creation or lower its costs; increased trust lower the costs for organization's business transactions, the likelihood of negative outcomes could be reduced, creating more predictable and stable returns; and the organization could build strong reputation that were rewarded in the marketplace by business partners, employees and customers (Rothaermel, 2017).

Having reviewed the literature above, a direct link has been shown between gainsharing and productivity, with labor productivity is measured by KPIs. For a manufacturing company, meeting KPIs are important in meeting performance measures which translate to meeting company goals. If the KPIs are not met, then the company goals are not met, and the company will eventually run into losses. The literature review has shown that one of the main gainsharing advantages is retaining talent (Long & Shields, 2020; Aguinis et al., 2012). Therefore, the proposition for this study is that when a gainsharing program is adopted, the program's strategic KPI will improve.

3. METHODOLOGY

Having done a literature review, identified a problem statement of the factory to be studied and formed the hypothesis for this study, the strategic KPIs and criteria were defined as the basis for the measurement for actual results, along with the percentage of the gainshare. The polycarbonate factory management selected for this study defined the strategic KPIs and its criteria, and the calculations of gainsharing to be paid out. These would be communicated to all employees. The strategic KPIs criteria were determined on a monthly basis and the results of the KPIs achievements were measured on a monthly basis. The pay out to the employees would be done on a monthly basis in line with earlier study where payout was immediate for better motivation.

Data of KPIs results was gathered by the production supervisors who in turn submitted the final results to the Production Manager. The Financial Controller of the factory then calculated the percentage of payout and sought the approval of the President Director. The participants of the gainsharing were all the factory employees. These were communicated to all employees by meetings.

The method adopted in this study was quantitative with data of KPIs results and data of gainsharing percentage payout collected and tabled monthly in Microsoft Excel. The data was then plotted into graphs by months for a duration of six years.

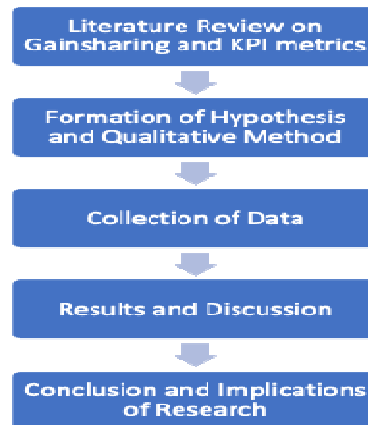The research process of this study was summarized in figure below.

FIGURE 3: Research process.

4. COMPANY BACKGROUND

The organization studied is a well-established United States of America company in eye visual lenses, in which production from Minnesota has expanded its operations to Indonesia in 1998 for strategic and profitability reasons. The glass lenses and polycarbonate lenses factory, located in West Java, Indonesia, was established within the framework of the country's foreign capital investment law and two years later joint ventures were formed involving local partners' investment. The company conducted business with high ethical and safety standards and implemented ISO 9001 in 2008. In 2009, unfortunately the entire Indonesia factory was burnt down in a devastating fire. In 2010, a state of art factory was built and completed on the same location. Moving forward then, modern, and innovative polycarbonate lenses and glass lens product variants were manufactured. In 2012, anti-reflective coating production was added boosting the manufacturing capabilities of the Company. In the organization, the President Director led a team of senior managers and managers who was in-charge of Production, which covered the Polycarbonate Primary and Secondary Operation and Glass; Quality Assurance, Engineering Maintenance and Automation, Production Planning and Inventory Control (PPIC) and Warehouse, Finance, Human Resource (with Health Safety Environment), Information Technology (IT). They formed the factory management. The management has long recognized that employees' satisfaction and recognition is important, and a form of rewards system should be in place; even though the factory has full infrastructure, facilities, and has good reputation being a US investor company with good products. The Gainsharing Program for manufacturing employees in the USA was successful and was thus introduced to Indonesia. The polycarbonate factory mentioned was also struggling to retain talent after the fire incident and a new team was hired.

In 2011, the polycarbonate lenses sales of the company comprised 76.1% of total sales and the glass lenses sales comprised 23.9% of total sales. The factory had about 690 employees. In that year, the gross margin profit for the Company on the overall was positive, with gross margin profit of the polycarbonate lenses positive, however the gross margin profit of glass lenses were negative. Unfortunately, the total manufacturing variance for overall, polycarbonate lenses and glass lenses were in the negative. The Gainsharing Program was first introduced in 2011 to increase productivity, on time delivery, and thus improve profitability to meet KPIs so that eventually the manufacturing variance could be positive. More so, after the new plant was built up after the major fire catastrophe, new teams had to be hired. The new employees were trained, however needed to be motivated to be retained and not leave the company.

The company needed to be on track in its performance measures as in the eye care industry, the demands were growing among the aging and younger individuals. The quality produced needed to be on par as there was increased demands in eyeglasses fashion, comfort, clarity, and safety. It was projected to reach 3.03 billion units by the year 2010 by Global Industry Inc. (Prweb, 2008). Presently, eyeglass lenses are available in three basic materials - glass, plastic, and polycarbonate and the Use of plastic lenses is gradually eclipsing the use of glass lenses. In meeting local needs, middle- and upper-income consumers living in urban areas and urban professionals who work in offices needed eye care products, as the nature of their work required them to work in front of computer screens for long periods of time daily (Businesswire, 2012).

The initial implementation was smooth, however, there were weaknesses in the rewards program and the company was tasked to identify the root problems and to find solutions to make the Gainsharing program work for their employees. This was of importance to the company because the KPI was tied to the criteria of the Gainsharing reward payout, which meant, if the employees were well rewarded, the Company was enjoying good growth. This study took place over six years where the external and internal environment changed over time and the Company took these into consideration when updating their KPIs and revising the Gainsharing payout.

4.1. Factory Key Requirements and Initial Outcome

In setting of the KPIs according to Oguz et al. (2012), the factory had several Key Performance Index (KPI) identified by the US Head Office, namely; on time delivery, reduction of job back orders, meeting process yields and continuous improvement programs. The overriding elements for profitability to achieve budget operating profits and Acceptable Out-going Quality Level (AOQL) which were non-negotiable from the management; and to avoid quality being sidelined while the focus was on productivity (Black et al., 2020). The budget operating profits term was translated to manufacturing variance. Using the guidelines of gainsharing implementation by Aguinis et al. (2012), the Gainsharing Program was rolled out to all employees in 2011 and it was a new incentive to all employees. On setting gainsharing payouts, the factory measured its performance and compared it with the historic baseline, a predetermined formula was used to share financial gains with employees according to Kretzschmar and Magno (2016).

The management introduced the program as following: the criteria set for polycarbonate (Poly) and glass lenses (Glass) production. In the Poly, the criteria were its Production Department achieving lower than 2% for AOQL, minimum 90% fulfilled for Job Order, costs of production (indicated as "costs in line") showed a positive variance, and not a negative variance; and yield goal for the month must be met; not missed. In the Glass, the criteria were its Production Department achieving zero Customer Complaint, zero Back Order for all products, costs of production (indicated as "costs in line") showed a positive variance, instead of negative variance; and yield goal for the month must also be met; not missed. The results were evaluated monthly in an excel format detailing each criterion with "Met" in green color, "Not Met" in red color and "Maybe" in grey color. The Gainsharing payouts were specific for Poly and Glass and a Common

payout for non-related production employees. The percentage of payout was determined by the number of criteria met and final approval from management. The criteria were shown in Table 1.

2011 Gainsharing Poly	2011 Gainsharing Glass
Criteria 1 Less than 2% AOQL Criteria 2 Minimum 90% Fill Rate on Job Order Criteria 3 Costs in line – Positive Variance	Criteria 1 No Customer Complaint Criteria 2 Direct Shipment on Schedule; No Back Order Criteria 3 Costs in line – Positive Variance

TABLE 1: Gainsharing Criteria for Poly and Glass in 2011.

The initial outcome from 2011 to 2013 was well accepted. According to the management, this was because 5% of actual employees' monthly salary was provided as rewards, therefore employees were very receptive to this program. Graph 1 showed the payouts in 2011.
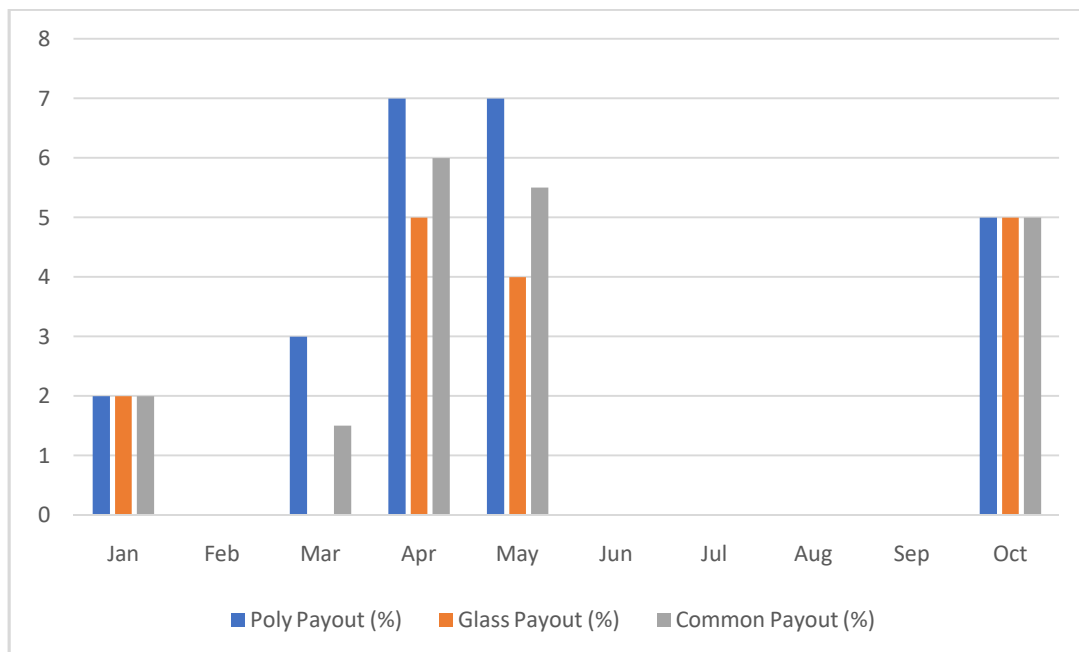
GRAPH 1: Gainsharing Payout for Poly, Glass and Common in 2011.

In 2013, additional criteria were added as the Company signed up for more accreditations to meet customers' demands. Concurrent with that, the management introduced a bonus system in addition to payouts for Poly. Poly was the main production and Glass was secondary. For the Anti-Reflective Coating (AR) production line it was not clear on the Gainsharing Criteria how these employees were rewarded and thus they were grouped under common payout. The additional criteria for Poly were quantity of lenses on hold below 10,000 pieces, increase from minimum of 90% to 92% for fulfilled job orders, completion of financial report in 3 days being met or not and completion of three continuous improvement (CI) projects was met or not. The bonus for Poly was the yield percentage increased more than 3% from target. For Glass, additional criteria where sea shipment schedule must be met at minimum 70% of the total shipments, completion of financial report in 3 days being met or not and completion of three continuous improvement (CI) projects was met or not. In May 2013, the new criteria and payout was table as per Table 2 and Table 3.

No	Criteria	Actual	Payout (%)
1	Yield	Not Met	0
2	On hold < 10000 pieces	Met	1
3	Minimum > 92% on Job Order	Met	1
4	Financial Report completed in 3 days	Met	1
5	3 CI completed in 3 days	No	0
6	Bonus for Yield >3% target	No	0
	Total Payout		3

TABLE 2: Gainsharing for Poly in May 2013.

No	Criteria	Actual	Payout (%)
1	Yield	Not Met	0
2	Sea Shipment > 70%	Met	1
3	No Customer Complaint	Met	1
4	Financial Report completed in 3 days	Met	1
5	3 CI completed in 3 days	Met	1
	Total Payout		4

TABLE 3: Gainsharing for Glass in May 2013.

In July 2013, a more streamlined criteria and bonus were revised for both production lines; even though Poly with AR production was the main and prominent department and Glass was much smaller. The revision was conducted to prevent any employee disunity and complaints. Upon confirmation of the revised Gainsharing program, the management conducted meetings to explain the program updates and to directly answer any doubts. The management realized this was more effective than sending emails or putting up memos. The revised criteria included a new collective criterion for both productions where it was mandatory for Poly and Glass to have positive variance on costs in line, AOQL for Poly at below or equal to 1.75% and zero customer complaint for Glass rose to management level. The Bonus for Glass is the same as Poly where the Yield goal exceeded by 3% from target. In addition, if one department had a negative variance for cost in line, the percentage of Gainsharing payout could not exceed the department which has a positive variance. With this implemented, employee satisfaction and good morale continued to be exhibited.

In November 2013, several incidents happened which showed the weaknesses of the Gainsharing Program, causing employee morale of the factory to go down. The Poly production failed in 5 criteria and only met 1 criterion. From the five criteria, two were barely missed by 0.2% on Yield and by 0.5% on Minimum on Job Order. The management learned that halfway through the month, when Poly production found out that they would miss the payout due to high AOQL, the employees did not hustle to improve the Job Order or Yield; and left the three CI projects incomplete. With that there was no payout for Poly. In the same month, Glass production did very well, and the Common payout was 2%; leaving Poly demotivated and jealousy set in. This incident repeated in February 2014, requiring immediate attention to review the Gainsharing program. There were months throughout the 2011 – 2013 period when the Gainsharing was substantially less or zero when the criteria were not met. The AR production employees felt they had been treated unfairly as they felt rewarded less and placed as "common". This resulted in the employees starting to bicker and finger-pointing started to occur at both department level and individual level. Eventually company overall performance was affected and everyone was

referring to the Gainsharing program as the 'loss share program'. The local labor union watched closely and voiced its apprehension and suspicion.

4.2. Factory Process Change

With the problems arising from the weaknesses of the Gainsharing, the management led by the President Director embarked on making changes. Making changes was difficult thus the management adopted the Peshawaria's Tool Kit to energize self by reevaluating one's purpose and values; then enlist a core team and finally energize the enterprise (Peshawaria, 2011). Top management were no longer allowed to be outside observers however they had to get their hands dirty and get involved in motivating employees. The senior managers and managers had to get together to identify and resolve any dysfunction in the teams to create genuine trust, buy-in and accountability (Lencioni, 2002).

The incentives of payouts and bonuses within the Gainsharing Program were re-evaluated and Company "SMART goals" was established. Engineering, Maintenance and Production Planning were the key drivers and systems were created with the help of IT and other departments to understand which parameters were important for employee motivation; as per Hermawan (2005) and Conger and Kanungo (1988). "SMART goals" were created and achievable, yet challenging targets were established. It was important to have realistic expectations and to stretch goals well; however, if the Company had consecutive months with no or very little gainsharing payout, employees would lose interest. Therefore, the "SMART goals" were to create a balance in managing expectations of both Company and employees. This was also no longer only a single department deciding criteria and not only the Human Resource Department organizing the meetings and workshops. A culture of a customer-supplier relationship was formed between interfacing departments according to Peters (2009) for Production, Quality, Warehouse, Engineering, Maintenance and IT, Human Resource, HSE and Security and Finance. This showed to the employees all departments had equal importance of role to play in achieving Company objectives and equal access to Gainsharing payout. Thus, a total commitment and genuine buy-in was required by all departments as per Lencioni (2002).

Re-evaluation was made of the criteria and payout schemes, based on employees and local country culture. Drawing on Hofstede (2018), an immediate observation was the difference between an individualist society of the company origin (the USA) and the collectivist society at the local setting (Indonesia). It was noted an individualist society would prefer equity-based rewards and a collectivist society preferred an equal-based rewards (DeMatteo et al, 1998). Therefore, even with the department payout and not individual payout, there were still weaknesses in the program in a collectivist society. In the end, the department payout for each Poly and Glass; and the common payout for non-related production employees was merged into one called "Total Points Achieved". In this way, all the employees felt more motivated as a collective group at a company level and not departmental level to achieve the goals. The employees felt a stronger sense of teamwork and thus stopped complaining and felt treated fairly. It was determined that all processes to produce a product were equally important (either Poly or AR or Glass, and also the non-related production); and that either all employees get the same reward, or no one gets it, in accordance with Sciacovelli (2018).

A series of empowerment and team-based training programs were established. This training included providing employees with broadened ideas on efficiency, and how-to continuously improve. The company decided on safety, health, and environment apart from meeting the production and quality objectives as stated in the Gainsharing program. As manufacturing safety had to be of priority to eliminate accidents, hazard identification and risk assessment for all production work processes was initiated and safe training was given to all employees. The HSE formed a committee with programs, for example for fire drill, safety patrol, safety motorcycle rider training. Full disclosure was given where information was posted regarding any work-related

accident that occurred within the factory, with a follow-up on preventive or corrective action plants. Monthly safety meetings were conducted to address safety related issues and explore opportunities for improvement. In the area of health, a clinic was set up with a bed, first aid administration, and medical tools like blood pressure monitoring. A doctor and nurse were on standby during dayshift. In the area of environment, area for hazardous material and hazardous waste for containing chemical solvents, machine lubricant and other inflammable goods were segregated and clearly identified. There was periodical monitoring by an outside agency for air ambience, noise, water, and dust for both inside and outside factory surroundings. With these in place, employees could participate and were empowered to perform better, solve problems and be able to meet the Gainsharing criteria, in agreement with Fadal (2004) and Lakshinarasimha (2017).

Various Outbound and Team Outings were organized and designed with specific processes and groups. The first outing took place in a holiday destination location 3 hours' drive from the factory in 2014, and in 2015 the team flew to Central Java, another vacation place. Company goals and strategies along with explanation of Gainsharing revised criteria and payouts were effectively communicated. Employees appreciated these outings because they gained more information and had interaction with the Top Management (Hermawan, 2005). Bearing in mind the importance of organizational health, the management was watchful of the three biases (sophistication bias, adrenaline bias and quantification bias) to be straightforward, to slow down on un-urgent task and have intuition over data analysis; so as to allow fun and bonding in (Lencioni, 2012). This continued as a yearly activity. Opportunities are provided to employees for both in-house and off-site training in technical, leadership, motivation, and team building, not as refresher training or keep motivational mood high but more for those who under-performed to do better (Hermawan, 2005). This was an intervention measure mentioned by DeMatteo for team-based reward to succeed (1998).

Performance appraisals were conducted yearly, and recognition was given for employees with outstanding ideas and contribution to company goals. In addition to the monthly Gainsharing Program, programs were set-up for annual performance bonus, a pension fund for all permanent employees, medical insurance for employees and their immediate families, and annual medical check-up for all employees. Annual recreation and family gathering with employees and their families were organized, and healthy meals were served at the company canteen. These were in line with Hermawan's (2005) findings where employees welcomed financial and non-financial appreciation and recognition. Specific conflict resolution workshops were formed to address any ambiguity of Gainsharing, in accordance with Hermawan (2005) that employees like to be heard and have issues resolved (Hermawan, 2005).

Companies must enhance the growth of society or they cannot contribute to its stakeholders (Rothaermel, 2017). The Company worked hard to have harmonious relations with the local labor union where periodic proactive meetings are held with employee representatives and management to hear the grievances and incorporate suggestions to create a better workplace. The company had active communications with the local community charity organizations, had its employees participate in sport competitions with other factories in the area; and joined human resource forums in the industrial estate area. With these, the Company enhanced its reputation among its stakeholders as per Rothaermel (2017).

5. RESULTS

Beginning from March 2014, the new Gainsharing Criteria was rolled out with all departments as one payout percentage for all employees. In 2012, anti-reflective (AR) coating products were introduced, and its gain share criteria was merged with Poly and Glass. This meant the three payouts were merged into one. The Gainsharing criteria tracked by month on four mandatory

criteria which gave a total point of 1%, which comprised AOQL of two Poly products to be below or equal 1.75% and 3%, zero complaint raised to management Level and Manufacturing Variance must be positive instead of negative. This was then followed by additional criteria where Poly, AR and glass had target yields to achieve for that month, no back order (termed as "On Time"), six continuous improvement projects closed within 3 working days and financial reporting completed within 3 working days. There was a bonus payout if the actual yield was above 3% of target.

In 2014, a special projects bonus was introduced at certain months of May, June, August, September, and October. Special projects varied from new products introduced, new technology machinery implemented or another type of raw materials experiment. Bonuses were paid when special projects were achieved and not paid when not achieved. The weightage of the percentage was assigned to every criterion after arriving at conclusion with the management and Department senior managers and managers for a balance in meeting Company objectives and input after outbound meetings and workshops on what would be the rewarding percentage to keep employees motivated and satisfied. The Gainsharing Criteria Program is shown in Table 4, with one final payout in percentage (marked *x*) in Column 5, for all employees in the factory.

Month, Year	Type	Criteria	Weightage Percentage For Gainsharing	Total Points Achieved (%) For Gainsharing
Month	Mandatory	AOQL	1%	*x*
		Zero Complaint to Management		
		Manufacturing Variance		
	Additional	Poly Yield	0.5%	
		AR Yield	0.5%	
		Glass Yield	0.5%	
		On Time	1%	
		6 CIP	1%	
		Financial Report	0.5%	
	Special Project Bonus		1%	
	Yield >3% Bonus		1%	

TABLE 4: New Merged Gainsharing Criteria launched in 2014.

After its rollout, throughout the year of 2014, there were no complaints raised to management level and all manufacturing variance was positive in the mandatory criteria; all 6 CIP and financial reporting were met in additional criteria. Most AOQL were met except June. Yield targets varied; however, there were 2 months where it was above 3%. In conclusion, this meant that the company objectives were mostly met, and Gainsharing payout for employees took place almost every month except June. This was well received compared to 2011 with several months of no payout, which also meant company objectives were not met. Special projects took place in May, June, August, September, and October. All were met except October. The average payout for 2014 was at 3.8%. This is illustrated in Graph 2.
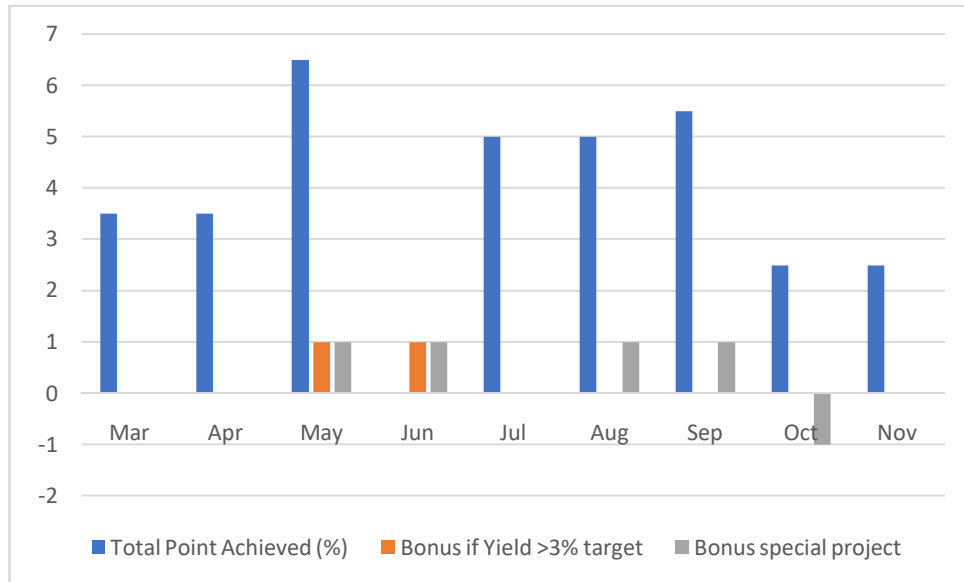
GRAPH 2: Gainsharing Payout and Bonuses in 2014.

In 2015, the Gainsharing criteria remained the same with no changes as all stakeholders were satisfied with the payout outcome in 2014. In 2015, there were payouts in all months except September. The average percentage of Gainsharing payout was 5.2%, which was an increase of 1.4% from 2014. In addition, there were nine months of bonus payouts for yields above 3%, which achieved more than 2014 with only 2 months of payouts. Therefore, the Gainsharing program benefited more in 2015 compared to the previous year.
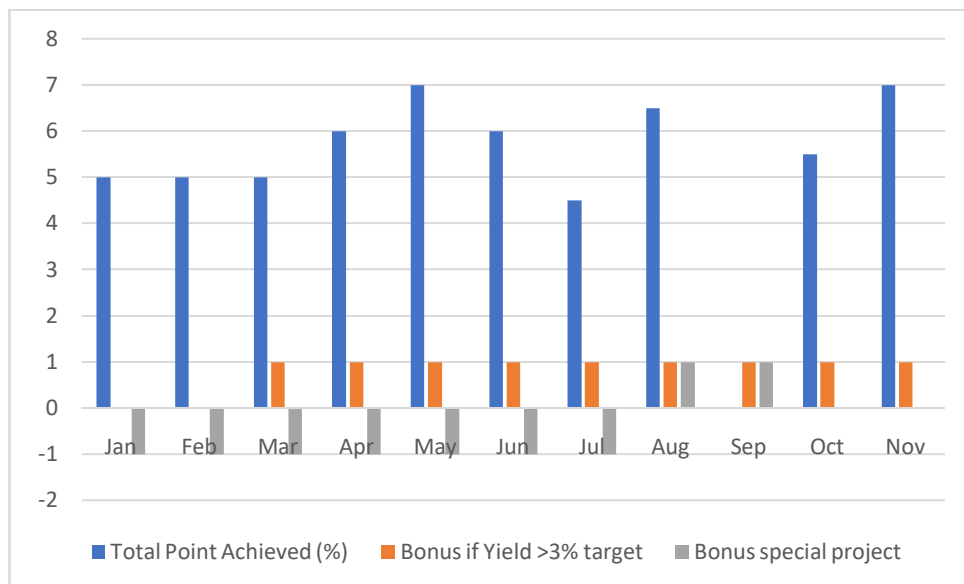
GRAPH 3: Gainsharing Payout and Bonuses in 2015.

In 2016, the Gainsharing payouts were achieved every month, even though the average payout was 4.65%, lower than 2015. This was also compensated with special projects being paid out

more this year at 5 months, compared to 2015, with only 2 months. The employees were satisfied.
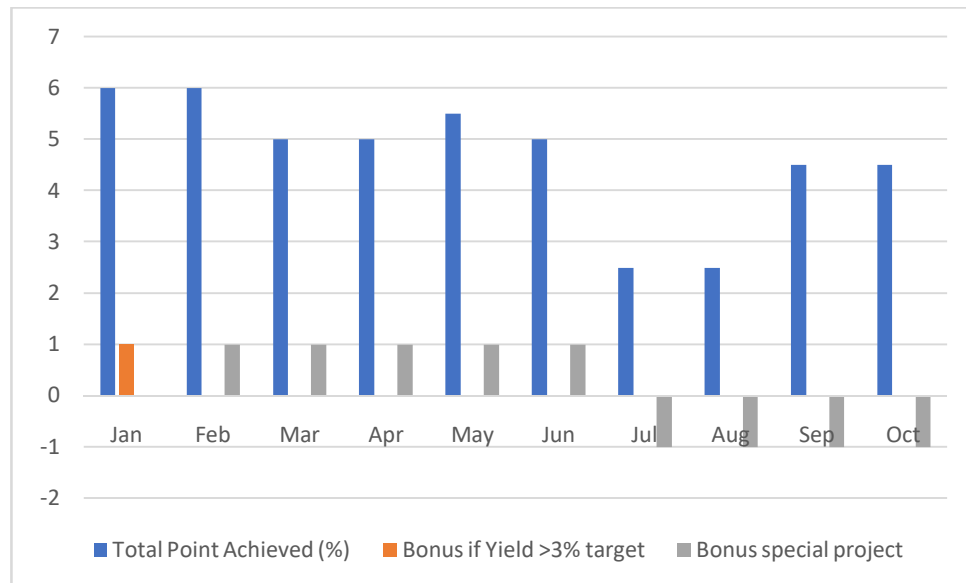
GRAPH 4: Gainsharing Payout and Bonuses in 2016.

The Gainsharing payouts in 2014, 2015 and 2016 were successful with almost monthly payouts. This also meant Company performance goals were met. The bonuses for yield above 3% and where special projects objectives met were paid out not monthly however the employees understood and accepted the criteria.

In 2016, the overall manufacturing variance was positive, along with Poly and AR production gave positive manufacturing variance. This follows Rothaermel (2017) where increased trust lowered costs and reduced the likelihood of negative outcomes. Only Glass gave negative manufacturing variance. This was a great improvement from 2011 where the overall, Poly and Glass were in the negative. This is shown in Table 5.

Year to Date Manufacturing Variance	2016 '000 (USD)	2011 '000 (USD)
Overall	+589	-635
Poly	+401	-503
AR	+ 397	0
Glass	-157	-132

TABLE 5: Comparison of Manufacturing Variance for Year 2016 and 2011.

For Glass production which did not show improvement in the years could be due to other external and internal factors not covered in this study. It could be due to slow Return of Investment (ROI) of production machinery for example. This did not impact the effectiveness of the Gainsharing program because the overall Company objectives had been achieved.

The Company gross margin increased 87 times in 2016 compared to 2011 in overall performance and the Poly and AR gross margin grew 7 times since 2011. The Company achieved its KPI by

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meeting delivery on time, reduction of back orders and meeting yield targets with a big group of satisfied employees for many years. The Company managed to retain talents especially after the major fire incident and employee turnover was low according to its Human Resource Department. Its 800 strong employees continued to meet consumer growing needs by being able to increase manufacturing capabilities. The company reaped good growth and enjoyed healthy profits finally. According to the management, the difference was "day and night". Going forward, as the employees become more developed over time, they may respond differently to group bonuses and team-based rewards may only be effective to the extent that they could be tailored to address changing needs at different developmental stages (DeMatteo et al, 1998). Therefore, soon the Company needs to reconsider its team's development growth and revise the gainsharing program accordingly.

6. DISCUSSION
With the data collected and presented in the graphs above, it showed that the hypothesis of this study was proven where when a gainsharing plan was implemented, the strategic KPIs would improve. These findings agreed with studies shown in Ameri Steel (Gross & Duncan, 1998), Hamilton (2003), Garbers and Konradt (2014), Kretzschmar and Magno (2016) and Black et al. (2020). The elements of agreement were with the study done by Gross and Duncan (1998), and Hamilton (2003) where gainsharing proved its effectiveness in improving productivity in Ameri Steel. This study echoed Black et al. (2020) where 81% of companies reported success in gainsharing. This study agreed with Garbers and Konradt (2014) in showing team-based rewards yield positive effects on team performance. This study agreed with Zondo (2017) that gainsharing improved productivity after capital investment had been made because this factory had to be rebuilt after fire. This study was also in agreement with Kretzschmar and Magno (2016) where the gainsharing guidelines implementation had to consider individualism-collectivism cultural norm and this study's findings showed collectivist traits were at play when different departments were receiving different percentages of payout. As the KPIs were achieved and gainsharing payout was almost consistent, this study also proved there was a good alignment between gainsharing and productivity due to good alignment (Rynes et al., 2004). The collectivist element where the different gainsharing percentage payout originally meant for two production departments and one for overall (three varying payouts according to which department the employee worked), had been transformed into one fixed factory percentage payout for all employees; regardless of departments. This further confirmed studies by Hofstede (2018), Black et al. (2020), Hermawan (2005) and Kretzschmar and Magno (2016).

Since the study was successful, the factory management reported that it enjoyed low employee turnover, agreeing that gainsharing did contribute to attracting and retaining talents (Long & Shields, 2010; Aguinis et al., 2012). The communication between managers and employees on the program and the following changes to the program proved effective; in line with citation by Black et al. (2020). The process change implemented by the factory showed that developing an easy-to-understand formula for sharing gains, maintaining transparency, and ensuring that the gainsharing plan's goals were in line with the organization goals (Roy and Dugal, 2005). The involvement from stakeholders proved important as well when revising the gainsharing program, confirming studies by Liker (2004) and Rothaermael (2017). This study proved to provide better results than earlier studies in Zondo (2017), and Benson &Sajjadiani (2018) where the authors concluded that the factories needed a review and revision of their gainsharing rewards as not all hypotheses were proven. The six-year period study provided time for the management to make some changes to the gainsharing program to gain better results.

7. CONCLUSIONS
The research question for this study was answered where gainsharing was implemented, the strategic KPIs improved as it confirmed earlier studies on the positive relationship between KPIs

and gainsharing. This study confirmed when there was a good alignment between gainsharing and performance measures, the gainsharing program would succeed. The study provided time to identify gaps that exist in the current program followed by updating the compensation process with revised performance elements (Black et al., 2020). The collectivist element consideration, clear communication, stakeholders' involvement, and the factory management willingness to do some tweaking and revision of the gainsharing program added success to this study. This was aligned to organization and management theory reviews (Cristofaro et al., 2021). The overriding benefits of gainsharing for the factory management was that it was able to attract and retain talents. The findings of this study could continue to be used by the factory management; and other locations should it expand next.

In conclusion, the President Director's words at the end of this study: -

"The Gainsharing program was an effective way to provide instant gratification to employees, because they obtained it every month, as opposed to once-a-year salary increases and yearly statutory festival allowances. This provided additional disposal income for them, something that was over and above what employees had planned for, and allowing them to purchase certain necessary items or even take the family out for a dinner or an outing. The investment cost for the company was minimal and was only in labor costs, but the advantages were enormous in terms of employee loyalty and in general increase in the "employees happiness index". The program, of course, needs to be managed prudently so that expectations are effectively managed. Such a program could be implemented across a broad section of businesses since it fosters Team Building and also rewards employees".

7.1. Implications for Research and Practice
The close relationship and openness between research academics and industry brought about success in this study and could be the ingredients for future research in other types of manufacturing sectors in a collectivist society, in the same country or other countries. The findings in this study could provide a recommendation to the industry; in particular the manufacturing sector, to strongly consider implementing gainsharing to incentivize employees to meet their KPIs. The manufacturing sector should commit to paying the gainsharing on a monthly basis and open to make changes on the program when needed as this study showed these were important for success. Since this study was qualitative, future research on KPIs metrics and gainsharing rewards should be a quantitative method for in-depth measurement; and including surveys conducted to employees in addition to company data collection. Other team-based rewards could be explored and measured for their effectiveness in meeting different types of performance goals, such as skills-based performance and project-based performance.

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Status of Knowledge Management In A Professional Services Firm To Address Turnaround Time and Quality of Service

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Abstract

Knowledge management is crucial for knowledge-intensive organizations, such as professional service providers. A study was conducted on a firm which specialized in survey, sampling and analysis for coal, marine and petrochemical commodities. The firm had issues in meeting turnaround time and facing poor quality of service from its surveyors and samplers, which increased customer complaints. The aim of this study was to find out the firm's current status in knowledge management (KM), possible barriers, and to provide recommendations. A qualitative method was used where nine heads of branches of the firm were interviewed using semi-structured open response questionnaire. The findings showed themes generated were the respondents supported and committed to KM, low KM management, lack of top management commitment and the firm's experts need training and development. This study confirmed that the status of KM was low and at infant stage and barriers were top management lacking commitment and inconsistent organizational practices. The recommendations provided were to move forward with KM, set up the business strategy and align it with KM strategy called Business-KM fit. Key employees were to be given training and development program.

Keywords: Knowledge Management, Professional Services Firm, Turnaround Time, Quality of Service, Indonesia.

1. INTRODUCTION

The ability to manage knowledge has become increasingly important in today's knowledge economy. Knowledge is considered a valuable commodity, embedded in products and in the tacit knowledge of highly mobile individual employees. The Cambridge Dictionary defines knowledge as "understanding of or information about a subject which a person gets by experience or study, and which is either in a person's mind or known by people generally" (Cambridge University Press, 2008). Knowledge does not only mean the know-how – to know how to, but also who knows, knows why and knows when. It does not relate to the wise books and best practices, but rather people – working communities that maintain knowledge about a topic and share what they know, build on it and adapt it for their own use. It is not a brief summary of what is known at a certain moment in time, but developing a body of knowledge maintained in its recent form by

people who use it regularly (Bencsik & Pawliczek, 2016; Drucker, 1999) concisely defined knowledge management as "the coordination and exploitation of organizations knowledge resources in order to create benefit and competitive advantage."

Drucker (1999) stated that the basic economic resource was no longer capital, natural resources nor labor, as it is and would be knowledge. With that there was a pressing need for knowledge-intensive organization for knowledge to be well managed in order to cope with shortcomings arising from the common uneven distribution of knowledge. The main goal of knowledge management (KM) was to promote knowledge sharing and storing and emergence of new knowledge (Souza et al., 2013). Considering that knowledge is a critical resource for the company, it becomes interesting to understand how KM system, pushed by digital innovation, can accelerate the process of creating value in the long term, guiding the corporate strategy towards new, innovative business models (Friedrich et al., 2020). Previous studies were developed from the KM system approach to strategic innovation and the implementation of new business models revealing that KMS guiding role in implementation and corporate governance (Hock-Doepgen et al., 2020).

The findings suggest that external KM capabilities of acquiring new external knowledge, converting it to be ready for use, and finally applying it for commercialization, are essential KM capabilities that enable SMEs to innovate their business model. Internal KM capabilities, emphasizing internal knowledge exploitation and replication, showed no significant effect on BMI. This finding might be related to the holistic and often disruptive nature of BMI that requires knowledge that is not available insight to the firm or might even be hindered by relying on traditional organizational knowledge (Hock-Doepgen et al., 2021).

IT tools and systems such as data warehousing, brainstorming applications, decision support systems, document management systems and information retrieval engines are used to enhance knowledge management practices by easing access to information, creating, organizing and disseminating relevant knowledge and information within the organization, to enhance organizational performance (Al-Manssori et al., 2021).

KM had received little attention in professional service firms, however, it is paramount for firm providing services to have their employees equipped with knowledge and their organization mature in KM implementation. In addition, the assets of such firms were experience and knowledge of staff, rather than plant and equipment (Fong & Choi, 2009). Therefore, it is important to investigate what is the status of KM in such firms. A well-established professional service firm in Indonesia, whose mission was "to become a technical solutions provider and minimizing our clients' risks by integrating technology with our services and delivering quality with integrity", had recently faced operation challenges. There was lack of quality of work in the Operations Department, namely Turnaround Time (TAT) and Quality of Service (QoS), resulting in reduced performance and increased of customers complaints. The lack of enthusiasm and motivation among employees could be detected. While business was growing, the firm was overwhelmed with problems of delay of reports and drop in quality of work, in addition of data management found to be lesser comprehensive.

In view of dominance of professionals dominating surveying, sampling and analytical discipline, the intermingled relationship between knowledge and service providers, this study aimed to find out the status of KM of an established professional services firm in Indonesia, and to provide recommendations to the firm management and business practitioners in related fields. This research seeks to answer "what was the status of KM in the professional services firm in meeting the firm's quality of work?" This study was aimed to align with organization and management theory reviews (Cristofaro et al., 2021).

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2. LITERATURE BACKGROUND

2.1 Knowledge Management

Knowledge was a productive embodied intelligence obtained by "positive education and learning" through which the man - worker receives the amount of knowledge that allows them to orient themselves, formulate opinions, enrich their analytical and deduction skills, conclude to synthesis, fully within the meaning of the needs of the organization. This knowledge includes both explicit and implicit knowledge. Critical knowledge encompasses identifying and mapping strategic knowledge and high-level critical knowledge, such as areas of advanced expertise, intellectual property, and the relationships with customers, suppliers, and distributors are important in KM and making business model successful (Ihrig & MacMillan, 2015). Knowledge was increasingly regarded as a survival tool in a dynamic and competitive environment (Laudan & Laudon, 2000). Efficient knowledge flow was critical to enterprise performance (Nissen, 2004). Information and knowledge were a strategic tool for an organizational survival and success (Choo, 1996). Knowledge made organizations to remain competitive and became prosperous among its competitors (Azizi et al., 2016).

Organized and contextualized data became information through contextualization, categorization, calculus, correction and condensation (Davenport & Prusak, 1998). Types of knowledge had been reviewed and methodically categorized (Alavi & Leidner, 2001). Tacit knowledge could only be learnt through practice and experience and it was subjective (Buckley & Jakovljevic, 2013). To make knowledge available to others, since it was also ingrained in people's heads and attitudes, it was imperative to turn it explicit (Maravilhas & Martins, 2018). Explicit knowledge was objective and rational, with the mind related to theories (Nonaka & Takeuchi, 1995).

Numerous definitions of knowledge management (KM) had been documented; such as, Demarest (1997) defined KM as a systematic underpinning, observation, instrumentation and optimization of the firm's knowledge economies. KM was an emerging set of organizational design and operational principles, processes, organizational structures, applications and technologies that helped knowledge workers dramatically leverage their creativity and ability to deliver business value (Gurteen, 1998). Bencsik & Pawliczek (2016) summarized most concise definitions as KM could be defined e.g., as a systematic and inclusive process of management and coordination of a wide portfolio of the company activities, i.e., retrieving, creating, storing, sharing, merging, developing, evolving, and use of the knowledge of individuals and groups with the goal to achieve greater business efficiency. In a later definition, Dalkir (2017) stated KM was a deliberate and organized method ensuring full usage of the organizational knowledge along with the employee's skills, capabilities, opinions, ideas and innovation to produce more effective and efficient organization.

Davenport and Prusak (1998) identify four KM processes or stages: knowledge generation (knowledge creation and knowledge acquisition), knowledge codification (storing), knowledge transfer (sharing), and knowledge application. There was a positive direct relationship between knowledge creation and technological and administrative innovation and knowledge creation had a positive effect on organizational learning (Rezaei et al., 2018). The concept of four phases which were commonly cited are knowledge acquisition, knowledge storage, knowledge sharing and knowledge usage (Kumar & Kumar, 2015). Birkinshaw et al. (2003) presented the knowledge lifecycle as an S-curve with four stages: creation, mobilization, diffusion and commoditization, as well as their strategic implications to help companies navigating through each stage of the knowledge life cycle. According to Staab et al. (2001), the knowledge process has four steps: creation, capture, retrieval and access, and use. Ward and Aurum (2004) proposed a seven-stage model: knowledge creation, knowledge acquisition, knowledge identification, knowledge adaptation, knowledge organization, knowledge distribution and knowledge application.

Another popular framework was by Nonaka & Takeuchi (1995), where the process of generating and converting knowledge had four phases which were socialization, externalization, combination and internalization, known as the SECI knowledge creation cycle. The SECI had the following explanation: -

Socialization: the process of converting new tacit knowledge through experience sharing (interpersonal communication).

Externalization: The process of articulation of tacit knowledge into explicit knowledge (publication).

Combinations: The process of transformation of explicit knowledge into a comprehensive and systematic set of explicit knowledge (by IT software support).

Internalization: The process of the embodiment of explicit knowledge into tacit knowledge (providing of products or services).

Internal sources of KM were design, customer database, sales, engineering, marketing, manufacturing and research and development; while external sources of KM were professional bodies, publications, industry associations, websites, research institutions and so on (Kumar & Kumar, 2015). Within an organizational structure, the creation of new knowledge at a practical level was happening at the organization's operations level, not at the upper (top management) levels. The longer leaders, usually top management (termed Executive) have been distanced from the current actions the more they make assumptions about what was actually happening. The senior management and management carried the most knowledge of the operations (Shelley, 2018).
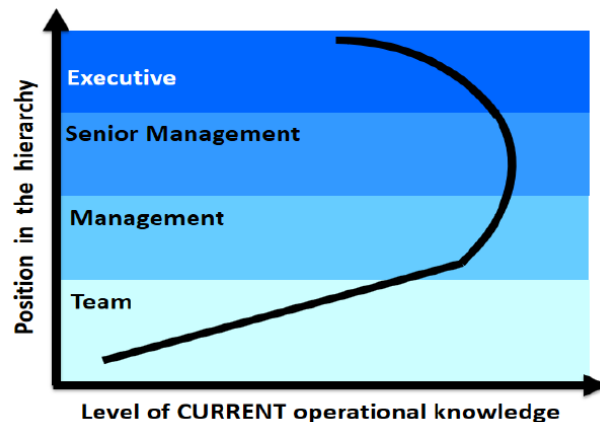
FIGURE 1: The distribution of current knowledge in organization (Shelley, 2018).

In Garcia-Holgado et al. (2015) study, the analysis of KM improvement was done using a Business Process Model Notation. It showed a possible evolution and enhancement of knowledge management processes using the Business Process Model and Notation diagrams, including the use of superior and better performing technological solutions to support knowledge management processes. This was important because knowledge encompassed not only documents, both printed and electronic, but also people, processes and supporting technologies.

There were many benefits of a well-designed KM in the organization, which included saving time and effort to get knowledge, so that all interested parties can use the organization's combined knowledge (Abdullah et al., 2005). Successful KM strengthen the core competencies of one

organization and lead to sustainable advantages making competitive edge more sustainable (Rahimli, 2012). Companies who used knowledge management in order to improve the efficiency of operational processes use databases and information systems to disseminate "best practices" independently from the "human knowledge carrier". It was not necessary to bring people together to share their knowledge directly and combine that knowledge by dialogue in order to create new knowledge. Thus, the codification strategy works best for this type of business strategy where knowledge was externalized, codified and stored in databases; making problems can be solved faster and skills and competency of the personnel can be improved (Greiner et al., 2017). For example, an internal audit department in a leading German transportation company used KM initiative to maintain the audit knowledge, reuse, and share it between the different locations. The knowledge necessary for the auditing process was determined, codified, stored in a database, and transferred in the form of "Best Practices", checklists, methods, etc. (Greiner et al., 2017).

Various tools of KM were physical and print document, public website, commercial productivity software, low-cost/no-cost cloud computing services, internal website, open-source content management software, low-cost/no-cost productivity software, enterprise management software and commercial cloud computing services (Rathi & Given, 2017). The list continued with authoring tools, templates, archiving, annotations, data mining, expert profiling, classification, blogs, taxonomies, metadata, mashups and folksonomies (Kaba & Ramaiah, 2017). Management tools were formalized for the performance of managerial functions could intermingle with KM in an enterprise, with the aim to build a creative environment in order to increase the efficiency of KM processes. Managerial techniques, tools, methods and systems for the area of management of service was Boston Consulting Group (BCG) growth share matrix, Pareto principle, CorSet Framwork, IT service management (ITSM), Service Oriented Enterprise Management (SOEM), Services management system ICT ISO 2000 (Bencsik & Pawliczek, 2016).

Fit as matching means that only theoretically defined combinations of variables led to a favorable outcome whereas the absence of match leads to an unfavorable outcome (Venkatraman, 1989). In a case study of 11 German and Swiss companies (all non-consultant companies), the matching relationship with innovation and personalization on the one side and efficiency and codification on the other side proven a successful KM strategy in business-KM strategy-fit. For repeated processes and reuse of knowledge, Greiner et al. (2007) suggested a KM initiative comprising efficiency and codification where efficiency was defined as externalization and re-use of knowledge, while codification meant collect, store, and disseminate explicit knowledge. The KM strategy could be joint with business strategy, forming a business-KM strategy-fit which will increase business performance (Greiner et al., 2007).
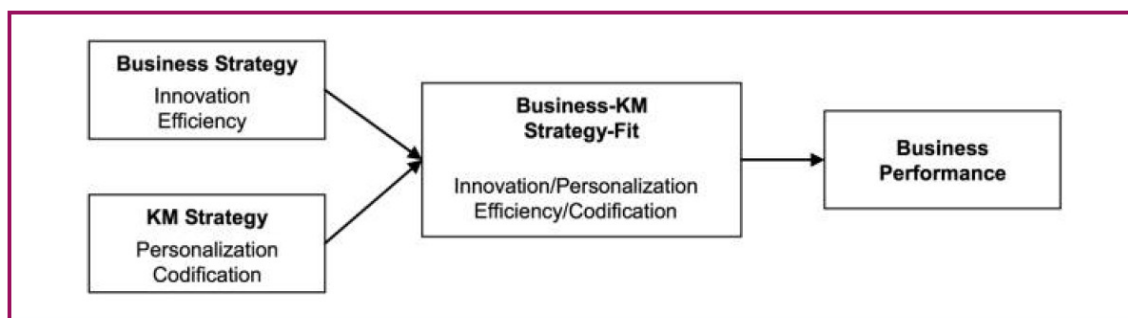

FIGURE 2: Business-KM strategy fit framework proposed by Greiner et al. (2007).

In higher learning institution, Abdullah et al. (2005) presented four core features for KM framework which were infrastructure, relating to content and portal; collaboration and learning; social capital, relating to expertise and communities; and business intelligence, relating to

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integration and measurement, to manage knowledge carefully and to save time and effort to get knowledge, so that all interested parties can use the organization's combined knowledge: knowledge is able to be used wherever and whenever it is needed, eliminating time wasting random distribution just-in-case people are interested. Yang's (2010) study of a high technology firm showed that KM strategy and performance connection was contingent on both performance-driven strategies and KM-based competencies, such as R&D from past projects, market intelligence and intraorganizational knowledge sharing. Hasanian et al. (2015) found that KM process, organizational infrastructure and technology were three predictors for effective customer relationship management process.

In Azizi et al. (2016) KM study in supply chain activities, KM would not affect the competitive advantage of the company by itself because taking advantage of the tools and knowledge management systems alone could not bring amazing results. In the first place it was necessary to apply the initial activities of implementation and knowledge application in the organization. The study suggested that management should identify and pursue the strengths and weaknesses of KM programs, and then accordance supply chain quality management system with KM system by the creation of mechanisms and processes of knowledge management in order for company to gain competitive position (Azizi et al., 2016). In an exploratory study, Mallmann et al. (2016) showed that most of the IT user respondents use collaborative systems and mobile devices unauthorized by the information technology department called (shadow systems) to share knowledge and communicate faster with their co-workers. The most common shadow systems cited are WhatsApp and Skype, as well as solutions to store and share content, like Google Drive. The authors believed that shadow information technology can facilitate knowledge sharing, especially when people are geographically distributed. In Kaba and Ramaiah (2017) study of education faculty members, PhD degree holders used more knowledge sharing tools compared to master's Degree, high school diploma and other degree holders and respondents with longer years of service used knowledge tools more frequently than those with shorter years of experience.

According to Fong and Choi (2009), examples of knowledge intensive organizations were accounting, engineering, legal firms, quantity surveying firms and laboratory testing firms, that provide expert advice and professional knowledge to clients. Because of the time-critical nature of most knowledge work in modern enterprise, KM should enable rapid and efficient flow of knowledge to help enterprise become more knowledge-based (Nissen, 2004). The issue of managing knowledge attracted much attention in quantity surveying firms, as only those that could best manage knowledge were able to preserve their competitive advantage (Hiebeler, 1996). The characteristics of the professional were requirement of an intellectual body of knowledge, a vocation concentrated on the application of knowledge and experience to provide an altruistic service to clients in a well-defined area of study, with suitable code of conduct (Lowendahl, 2000). A professional firm had more than 50 percent processional employees who were in charge of key decisions and activities and its services included high degree of discretionary effort and personal judgment (Lowendahl, 2000). There was also substantial interaction with client firm representative (Fong & Choi, 2009). A quantity surveyor firm demonstrated four essential characteristics were knowledge-intensive nature, advisory nature providing consultancy, competence governed by institutions and code of conduct government by the country's professional ethics regulation (Fong & Choi, 2009). The development of knowledge storage is not free of flaws and inevitably requires some protection. Explicit knowledge, which codifies the organizational wisdom, is famous for its susceptibility to malicious damage and pirating by rivals. Therefore, quantity surveying firms often impose restricted access to confidential/sensitive information (Fong & Choi, 2009).

In a study on quantity surveying firms, KM was found to benefit the firm in a discrete manner and highly intermingled relationship with the daily processes, therefore the scope of managing KM could be overlooked (Fong & Choi, 2009). This was true as the firm lacked assigned staff for

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knowledge acquisition from external sources. The favorite modes of knowledge research were colleagues' experience and personal networks. The types of knowledge, cost data, contracts and standard methods of measurement attracted the most frequent visits by quantity surveyors in their searches. Hiring new recruits to bring in new surges of knowledge was a reluctant move. Job rotation or records by experienced or departing staff were underused. Despite this, they gained knowledge from reviews at the conclusion of projects. Knowledge was found to be arranged in systematic forms because the documents were selected and organized before stored. Some data were transformed into organization's routines. Paper documentation was made available to all staff. Mobilizing of knowledge was observed through mentoring ranks. Provision of remote access for organizational database was still rare (Fong & Choi, 2009).

The empiric research (primary and secondary) indicated that the knowledge of sophisticated management methods, tools and systems on management positions in small medium enterprises (SMEs) is very low. This knowledge, however, due to the increase of innovativeness and competitive advantages of enterprises has to be permanently created by tools of a learning organization and transferred, ensuring its continuity (Bencsik & Pawliczek, 2016). Similarly, in Malaysia, the studies collated by Wahab et al. (2021) on KM development in terms of implementation and effectiveness had been done on healthcare, customer services, manufacturing, construction and education and it showed KM was at a young age.

Factors such as reward system process innovation and intra-organizational sharing can improve the effectiveness of KM, while market intelligence could hinder the positive impact (Yang, 2010). KM and organizational learning were related to one another. KM, especially knowledge creation, had a positive effect on organizational learning and a positive direct relationship between organizational learning, technology and administrative innovation (Razaei et al., 2018).

According to Ceptureanu et al. (2018), there were four categories to KM barriers which were related to organization, related to knowledge, related to people and use of technologies. In rotated factor matrix analysis, it was found that the most important barriers in creating knowledge were poor retention rate of highly skilled employees, followed by centralization, time constraints, poor targeting of knowledge, unsupportive organizational culture, high causal ambiguity (not knowing what the information was supposed to be used for) and inconsistent organizational practices; followed by insufficient top management support, poor leadership and lack of congruence (Ceptureanu et al., 2018).

Top management had to commit and willing to invest in expanding knowledge resources and KM in order to be a knowledge-based organization. KM initiatives should put resources into both the internal and external assets of the organization in order to fully utilize the proper knowledge (Wahab et al., 2021). Top management could provide employees with a sense of direction by setting the standards for justifying the value of the knowledge that was constantly being developed by the organization's members because deciding which efforts to support and develop was a highly strategic task (Nonaka, 2017).

2.2 Organizational Behavior and KM
There are five organizational constructs that support the KM process: human resources, team work, organizational culture, organizational structure and development and absorption of knowledge. These constructs were related to four phases of the KM process (acquisition, storage, distribution and use of knowledge) (Gonzalez & Martins, 2014). Gonzales and Martins (2014) study expounded KM as followed. In the knowledge acquisition process, training programs were important mechanisms and more rigid hierarchical structure reduced decision making and, as a result, the process of learning too. In knowledge storage process, individuals were responsible for storage of tacit knowledge, retained in the form of experience and skill, and the retention of knowledge required from the organization discipline in identifying new knowledge and encoding

them when possible. In knowledge distribution process, the development of skills enabled individual to absorb new knowledge and the skill level of individuals could support or restrict the process of distribution of knowledge; and the culture of knowledge must promote the dissemination of knowledge and a sense of trust. In knowledge utilization process, competence referred to the ability of individuals to use the acquired knowledge in practical situations in order to solve problems and systems for performance management and rewards should reinforce a proactive attitude of employees, aiming at problem solving and continuous improvement. The use also occurred through the rescue of explicit knowledge, encoded in an information system.

The economic and production level of a company relies more on its brainpower, human capital and invisible competences than its physical assets (Rahimli, 2012). The three players involved in KM were: persons, covering their skills, experiences, cognition and learning ability; the groups, which used the synergy between individuals to achieve goals; and the organization, that guided the actions of individuals and groups through the structure and culture established (Lystras & Poulodi, 2006). Organizational culture was responsible for the development of similar value and assumptions between individuals, to create a conducive environment to share and integrate knowledge (Gonzalez & Martins, 2014). Organizational structure defined the degree of autonomy granted to individuals and the division and formalization of work and functional integration (Gonzalez & Martins, 2014).

Among the human resources development initiatives that contributed to the KM process are employees selection, training and development (Chen & Huang, 2009). KM process required the organization to hire and train individuals to fit into company culture and primary knowledge capable to contribute to the organization knowledge (Cardoso et al., 2012). Organization must build a participatory internal context in which the employee was motivated to collaborate with a team (Chen & Huang, 2009). The lack of appreciation of individual or group initiatives to support organization's strategy may mean a reduction in process of new knowledge exploration (Lopez et al, 2006).

Human capital research focused on human engagement on the job (Weidner, 2018). Work being accomplished primarily by teams rather than individuals was significant for KM, because teams had become the unit of knowledge creation within organizations (Dixon, 2018). A team member offered others advice to address a problem or question and building on each other's ideas and incorporating diverse ideas into their work (Dixon, 2018). Team members could offer a range of feedback on the work of others, including inputs, agreement, appreciative comments, likes, etc. to keep project momentum going (Dixon, 2018). Teamwork was important to create people with common language and identity, encouraging the dissemination of knowledge (Gonzalez & Martins, 2014). Teamwork was responsible for distribution of knowledge as employees of different skill and experience level were put together (Gonzalez & Martins, 2014).

The 2016 Deloitte Human Capital Trends claimed that this structure of network of teams had shaken the foundation of organizational structure where humans would become the ultimate center of gravity for KM going forward, not technology (Weidner, 2018). Development and absorption of knowledge was related to the ability of individuals in building a common knowledge base, which favored the integration of new knowledge, internally and externally to the organization (Gonzalez & Martins, 2014).

3. METHODOLOGY
3.1 Study Methodology
Drawing upon literature review on KM, and understanding of the business problems in the professional services firm earlier mentioned, a study was conducted to find out the status of KM of a professional services firm in meeting the TAT and QoS. To find the KM status was important to the organization because, while it could be at a good level in the Head Office, it may be at a

lesser level in the branches, and may vary from branch to branch. From here, the researchers would seek to provide KM recommendations to the firm.

This study adopted a qualitative method semi-structured interview and collection of related firm's data. The questions were pre-planned prior to the interview but the interviewer gave the interviewee the chance to elaborate and explain particular issues through the use of open-ended questions. This type was appropriate to researchers who have an overview of their topic so that they could ask questions. A structured format which may hinder the depth and richness of the responses therefore, it had been recommended that these open-ended questions be piloted in advance (Alsaawi, 2014). The persons selected for interview were the heads of branches and head of divisions because they had the highest knowledge of the operations (Shelley, 2018).

There was a total of nine respondents chosen: they were Heads of Branch and Heads of Divisions, with an average of seven years' service with the firm, aged between 35 to 50 years. All respondents held a Bachelor Degree in Engineering, except the Head of Division – Coal held Masters' Degree in Science; and had prior experience of at least five years in field survey and sampling. During the interview, conversations were recorded for both in person or by telephone due to far distances. The respondents comprised of six Head of Branch – two from West Java (coded as West Java 1 and 2), two from Sumatera (Sumatera 1 and 2) and two from Kalimantan (Kalimantan 1 and 2), and three Head of Division – Marine, Coal and Petrochemical. There were ten questions asked, of which seven of them could be summarized and tabled, and the remaining questions and additional responses would be reported in paragraphs. Qualitative interviews would be conducted where questions are about the respondents' level of understanding about KM, what are their opinions about the current operation and experts' performances, if KM could improve TAT and QoS, and if the firm supported KM. A thematic analysis was adopted to analyze the interview responses to identify common themes - topics, ideas and patterns of meaning that come up repeatedly, where interview excerpts were analyzed to create codes, followed by generating themes (Caulfied, 2019). Interview questions were listed in Appendix 2. Responses and answers to the interview would be tabled and discussed along with related company data. Responses would be reviewed and mentioned if in agreement with literature review conducted earlier. From the findings, recommendations would be made to the firm on aspects related to KM.

3.2 Company History and Background
A well-established and among the largest privately owned professional services firm in survey, sampling and laboratory analysis, was trying to keep up with market demands and customer trends. The firm had over 40 years' experience with 15 branches in Indonesia. They would like to find out what was the status of KM in their firm and were willing to volunteer and participate in this research. The company had five divisions: coal, agriculture, petrochemical, mineral and marine. The coal department held the largest revenue contribution with about 60% of total revenue, while agriculture had the most jobs in monthly at almost 600 jobs per month. The breakdown of the firm's revenue by division was Coal 42%, Agriculture 32%, Petrochemical 16% and Marine 10% in 2017. At the time of this study, mineral department had no revenue due to change in government regulation, therefore it was not included in this study. The firm fully attained required accreditations, which were ISO 9001: 2008, ISO 14001: 2004, ISO 17020, OHSAS 18001: 2007 and ISO 17025: 2005.

The operations department of the firm was headed by the Director of Operations. The team comprised of 50% of the workforce in the firm. The Director had three regional heads who were in charge of several branches per person, to cover all 15 branches. The division heads of Coal, Agriculture, Marine, Petrochemical and others reported to the director too. The head of branch then had operations leader and laboratory leader. The surveyor and the sampler reported to the head of operations and the preparator and analyst reported to the head of laboratory. Figure 3 shows the main section of the organization chart for operations department.
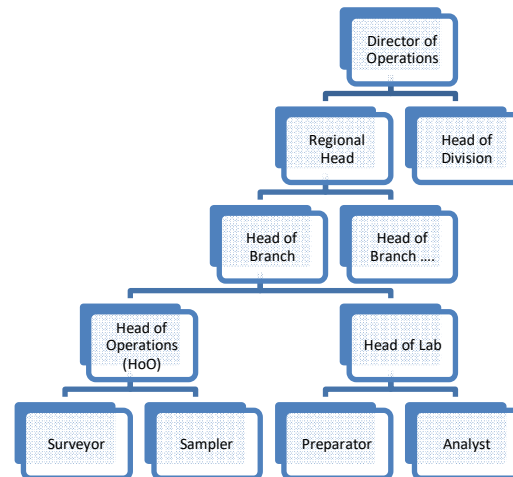
FIGURE 3: Main section of the organization chart of the operations department of the firm.

There were three main service scope of services where upon completion, results reports and certificates were generated for clients. The main types of survey for coal division were draught survey, sampling survey and regulatory survey; for agriculture division – supervision survey and sampling survey; for marine division – bunker survey, off-hire survey, supervision survey, draught survey and quantity and condition survey; and for petrochemical division – supervision survey, tank inspection survey, regulatory survey, verification survey and stock take survey.

The first service scope was site survey for issuance of Certificate of Weight (CoW) for the commodities, which were conducted by surveyors. The second service scope was sampling, which were done on coal and mineral samples, and the report from survey was called Certificate of Weight (CoW), while the report for samples result after analysis was called Certificate of Analysis (CoA). Sampling was not only done on board but could also be done at the stockpile, mining face, or inside haul truck, depending on client's location for sampling. Sampling was still categorized as a survey in accordance with the distribution of service scope survey. The third scope of laboratory analysis consists of preparation and analysis activities; which was a continuation from the sampling process in coal shipments with CoA as the final report; or the service was done only analyzing the drop of sample in which the report was named Run of Analysis (RoA). The marine survey contributed to 60% of the total business and the coal sampling contributed to 33% of the total service in the Coal division. The services of the firm were led by a group of "experts" defined by the firm, who were the head of operations, head of laboratories, senior surveyors and senior analysts at the branches. They were deemed of importance because they were the firm's representatives to the customers to carry out the professional services and had technical knowledge and experiences.

The operations in the firm started with each incoming purchase order/job received at the Head Office and being processed by Sales Monitoring Officer (SMO) to Sales Order (SO) and Job Order (SO). Then it was forwarded to Head of Operations (HoO) copied to Head of Branch to be executed. After the HoO received the job, he/she would appoint a senior surveyor (and sampler depending on the scope of service) to undertake the tasks. Any laboratory analysis service cope required would be channeled to the Head of Laboratory. HoO would be required to update of the status of experts handling the job. The surveyor then conducted the survey, made preliminary report and follow through until completion of report. The turnaround time (TAT) and quality of service (QoS) were measured at the branch level where jobs are executed. The Heads of Division, based at Head Office, did not undertake the jobs, but developed Standard Operating Procedures (SOP), supervised 'experts' compliance, developed quality control (QC) templates for

HoO, conducted the QC checks on reports and provided technical guidance to the sales department. The Head of Branch managed all the activities at the branch.
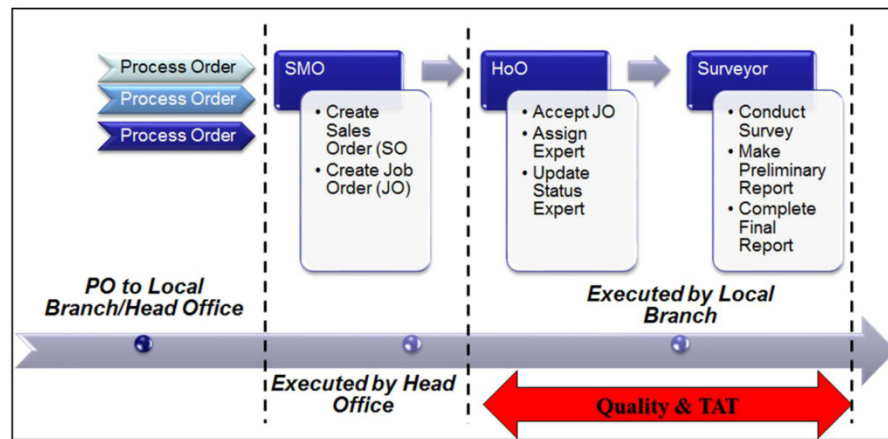

FIGURE 4: Job Order Process Flow of the Firm.

The firm defined Quality of Service (QoS) or compliance service as how true the surveys were conducted in accordance with standards, integrity, and being proficient in explaining the problems experienced by the client. The success indicator of maintaining survey quality was in the absence of complaint from customers and receiving good feedback. In this case the surveyors (and samplers) played an important role because they were handling with clients in the field, so it was very important to ensure the quality and competency of surveyors the firm sent. The quality of the service was directly related to the surveyor appointed when he/she was conducting the survey. As such, the selling point of the firm were tied to the quality of the surveyors.

The firm defined the concept of turnaround time (TAT) as how long it would take to complete the work in terms of completion of the certificate and report, approved by client and then loaded into the firm's reporting system. TAT consists of three stages, namely TAT 1, TAT 2 and TAT 3. TAT 1 was preliminary report or daily update in 1 to 2 days. TAT 2 comprised of complete loading data and final draft of report to be reviewed by client; requiring client approval; on day 3 onwards after TAT 1 was completed. TAT 2 would take another 2 to 3 days. TAT 3 was about the completed final report or certificate in soft copy and loading of its hardcopy in 1 to 2 days. The expected completed TAT was 7 days. The TAT scope of work was divided into two sections namely TAT for Survey only (Marine, Petrochemical, and Agriculture) and TAT for Survey Quality and Quantity (Coal and Mineral). Hence, the firm's Key Performance Indicators (KPIs) for all its branch offices were Turnaround Time (TAT) and Quality of Service (QoS) as identified by its top management, because all the services were carried out at the branches which were servicing its clients.

In 2017, the firm reported 117 complaints received where 68% of the complaints were related to issues of QoS, work quality and/or competence experts and TAT. These incoming complaints were received by email and verbal communications. There were some complaints that were not directly channeled to the firm but via third parties. The increased number of jobs received were in direct proportion to the increasing number of complaints. The firm viewed complaint as valuable feedback to improve company performance. The firm understood that the delay, or lack of responsiveness to resolve the complaint would bring adverse effects. Arising from this, the firm was pointed out that to reduce complaints were to look into the QoS and TAT.

The firm had an online operations management system called "MAYA", which integrated all activities from purchase orders, job orders, branch/business segment and expert assigned,

service scope, job status, issues in field, expenses report and TAT tracking. Client reports and certificates were uploaded into the system. The data could be used to perform analysis, decision making, and job process tracking if any complaints were entered. The firm had several KM tools, namely: best practices sharing, customer complaints sharing, focus group discussion and an online Standard Operating Procedure (SOP) system, to facilitate retrieving processes in job activities, results conformity checking, and for audit purposes. The online SOP had another function which was for knowledge transfer when there were new employees in the induction process. All employees were also given Internet access.

4. RESULTS

At the start of interview, all the respondents agreed that TAT and QoS were the firm's operation performance and Key Performance Indicators (KPIs), created firm's value and reputation, and affect customers' satisfaction. TAT and QoS were also related to company ability and employees' ability.

The first question was on the level of understanding of KM, the majority of respondents had high understanding of KM rated as "high", while two had average understanding rated as "medium" and one did not have much knowledge rated as "low" in relation to literature review conducted. Among the "high" responses, answers are KM was about managing knowledge in an organized way; with knowledge sharing, and then stored, distributed (knowledge transfer) and used. This was the KM processes answers, as mentioned in Davenport and Prusak (1998), and Kumar and Kumar (2015). The respondents whose answers were "high" and "medium" rating stated that KM was tied to performance, agreeing with Yang (2010); and could benefit the organization by increasing performance and competitive edge (Rahimli, 2012).

In the second question about whether implementing KM improve TAT and QoS, all respondents except one (who had low knowledge of KM) agreed that KM would help to improve TAT and QoS. The respondents stated that KM was related to data management and data made available would help in justifications of decisions and currently accuracy in decision was needed to have better TAT and QoS, which could only be achieved by making knowledge and experience available. Using KM allowed some form of standardization of report making, and with that following the same standards across branches. TAT and QoS could be monitored in daily basis, reported, and escalated if any issue arose. By using KM, the existence of managing of knowledge would contribute to increase of knowledge among the 'experts' and other employees. This made knowledge and experience sharing, and the firm's best practices could be easily accessed and allow transfer of knowledge. KM helped the employees to rely on system for information and not rely on individuals anymore. This was in accordance with Greiner et al. (2017). KM would only be successful on improving TAT and QoS, if its initiatives were implemented consistently, with commitment and made into part of the company culture. In this question, needs were also identified as priority scale for to prioritize jobs, better manpower distribution and training and development to improve employees' competency. Proper training was required so that 'experts' could be more confident.

For Question 3 about what the respondents think about current operation performance, of TAT and QoS, two respondents replied the current operation were good. Kalimantan 2 responded they had top management resources and support probably because they were the biggest branch and handling major account customers. The Head Office also put high scores for milestone on them so extra effort was needed to achieve management expectation. Petrochemical responded their TAT measured up to preliminary report and agreed by client. It was average for West Java 1, Sumatera 2, Marine and Coal. Responses were middle level performance, not outstanding and similar to competitors. Some area of improvements was needed; because for example Marine's KPI achievement was 90%, and for Coal, they had increased of job orders therefore extra monitoring needed in TAT and QoS. It was not satisfactory for Sumatera 1 and Kalimantan 1.

West Java 2 had constraints. Sumatera 1 did not have a dedicated HoO who could supervise the experts. Kalimantan 1 was experiencing lack of experts. For West Java 2, current performance in TAT of laboratory analysis had constraints due to non-availability of consumables, incompleteness of laboratory analysis, and sometimes equipment breakdown. If KM tools could be expanded, inventories on laboratory consumables could be stored and reviewed resulting in prompt replenishing of stocks.

In Question 4 about was there any improvement effort to increase operational performance of TAT and QoS, majority respondents (Kalimantan 1, Sumatera 2, Kalimantan 2, Marine & Petrochemical) viewed the improvements in their branch or office as partial and not optimized. They stated there should be focus and specific attention was required to resolve issues in their branches, and there should be some form of standardization of certification and dealing with internal business processes to resolve TAT issues. West Java 1 respondent stated there was lack of effort in their branch, while the improvement was concentrated in Head Office, which should not be the case because the 'engines' that drove the firm were the experts at branches. West Java 1 further added these were the employees that required high competence and their system required improvement on TAT. Sumatera 1 respondent answered yes however only for incidental situation, for example an issue rose from a customer complaint and the Head Office stepped in to fix it. Sumatera 1 added that there should be some form of consistent improvement program for TAT and QoS and the branch was to be equipped to conduct the improvement properly. West Java 2 respondent faced laboratory maintenance issues. Even though they had technicians to repair the equipment, there should be regular maintenance program to ensure the laboratory equipment was running smoothly. Only Coal respondent answered yes, as they have ongoing improvement efforts on TAT and QoS, and they were able to provide recommendation to top management. With KM tools, data about the next due dates for equipment maintenance and calibration, preventing breakdowns.

For Question 5 on whether they think if all of the experts were in compliance, the majority of the respondents said their experts follow their seniors or somewhat comply because they did not have formal training or taken any assessment before; and if they have variations in the task, they would be confused and have difficulty in completing the job. This was also dangerous as they might follow without fully understand the concept of the work. Their experts also lacked experience. This situation was similar with Fong and Choi (2009) study, where the favorite mode of research was colleagues' experience. The respondents felt new recruits should receive formal training and be assessed by Head Office to accelerate the learning process. Marine respondent replied every branch had different reporting method causing compliance not being objective. Only Kalimantan 2 respondent and Petrochemical respondent answered yes that their experts were in compliance because they were governed by ISO 17025.

For Question 6 on whether the respondents think if the organization support in providing resources for KM development, three respondents answered yes but it was optimized and one answered yes because there was some form of online access, and another answered maybe. Four respondents answered no, because, while there were systems like MAYA and SOP online, a system to improve TAT and QoS did not exist. There were no concrete results from top management in KM initiatives and they were in the mode of "more of corrective actions rather than preventive actions". They further stated that while the firm had the MAYA system that could be accessed online, however, it could not yet be used as part of QC nor does it connect information from field directly. Currently, the data was inputted by an office staff based on information given by surveyor in the field. If this system to become an online application that integrate data in the field, QC processes, real time reporting and provide some form of access to clients to monitor the results of survey, then this system would value add for the firm. The online system would reduce face-to-face coordination time or via phone; and would bring real time as any assigned QC person, HoO, surveyor, and sampler were connected in one application via online. Wherever the assigned QC person could perform QC process via smartphone, the result

of each preliminary report could be completed in just one hour. This would in-turn reduced TAT drastically. The respondents had described an example of KM tool, a form of commercial cloud computing service as cited by Rathi and Given (2017). For Question 7, respondents were asked if they could be committed to be involved in KM initiatives. All respondents agreed to commit to KM initiatives implemented by the top management as these would help solve TAT and QoS issues and reduce related customer complaints. Interview questions and answers for the seven questions were tabled and found in Appendix 1.

For Questions 8, respondents were asked what were the problems and challenges resulting in late TAT and poor QoS. Most respondents replied that the Quality Control (QC) process to check on the quality of analysis data, reports and certificates took longer than needed to be done. This was because this is done by the HoO, and HoO was also occupied conducting surveys themselves, due to lack of senior surveyor manpower. This resulted in the TAT for the QC being 1 day becoming 3 days. Sumatera 2 respondent added there was no commitment from top management to follow through a program implemented. The other challenge for branches were no access to real time data, while customers expected real time data. They were still using WhatsApp messaging, and felt an online application would bring real time data, automate the reports generation and reduce manual work, thus providing results to customer in timely manner.

For Question 9, majority of the respondents stated their experts were in need of development program (training, courses, and certification) including soft skills training, to be able to handle the technical aspects of the job and relationship aspects when handling customers. This was because the respondents felt their team lack expertise and skills. On the other hand, the respondents felt for the highly qualified and performing experts, they should be rewarded accordingly; being paid more or have more benefits. Four branches (Sumatera 1 and 2, Kalimantan 2 and Coal) had experienced of experts with behavior issues, for example were not punctual to customers' site, however there was no disciplinary actions taken. Kalimantan 1 had some experts who left their workplaces messy and unorganized making retrieval of documents difficult. West Java 2 and Sumatera 2 experienced broken equipment due to absence of regular maintenance program, and laboratory consumables finished before re-stocking.

The last question was about if there was any effort to increase employee involvement in KM program, for example management policy and endorsement, coaching and encouragement from superiors. Most respondents replied that the top management was required on commitment to KM program implementation from start until completion, required their encouragement and endorsement, be aware of issues in the field if not hands-on about it in order to make better decisions. KPIs assigned should have periodic reviews. Employee positions should be differentiated by pay compensations and/or benefits. Make employees in the know. To focus on improving quality of work, and not cutting costs to increase profitability.

5. DISCUSSION

From the interview excerpts reported under the Results session, the main points of interview results were highlighted as codes to generate themes, according to Caulfield (2019), in Figure 5.

Interview Results Codes	Themes
- Majority had high understanding of KM - Majority agreed KM will improve TAT and QoS	Support and commit to KM
- Data not easily available and accessible - Data was non-standardised - Poor laboratory upkeeping	Low KM management

- Top management's lack of investment in KM program ⎤ Lack of top management
- Top management's lack of follow through in KM ⎬ commitment
  program
- More benefits for experts

- Experts followed previous seniors' work ⎤ Experts need training &
- Better manpower distribution ⎬ development
- Experts need training and development for technical
  and soft skills

FIGURE 5: Themes generated from interview results.

From the interview results, the four themes generated were the respondents supported and committed to KM, low KM management, lack of top management commitment and the firm's experts need training and development. The head of branches and divisions showed support and commitment to KM, because they know the most information in the field as per Shelley (2018), where they understood the importance of KM for their organization. The next theme is low KM management indicated that the status of KM in the firm was still very low or at infant stages. This was in agreement with studies by Bencsik and Pawliczek (2016) in SMEs where KM level was very low and Wahab et al. (2021) on logistics service provider in Malaysia where its KM status at infant stage.

The next theme was lack of top management commitment; which was identified as one of the barriers to KM where it was found insufficient support, the incomplete follow through and inconsistency of KM program which was inconsistent organizational practices, as cited by Ceptureanu et al. (2018). Certain branches were neglected from top management focus. The firm's culture should be changed to avoid incidental improvement, move from corrective actions to preventive actions, focus on quality improvement and not on cost cutting to have more efficiency. KM tools to expand to include important information for example laboratory consumables inventory and equipment maintenance due dates. As Wahab et al. (2021) stated that top management had to commit and be willing to invest in KM programs.

The recommendations for the firm to move forward on KM processes because it was a professional services type of firm (Lowendahl, 2000) and KM was a systematic and inclusive process of management of a wide portfolio of company activities (Bencsik & Pawliczek, 2016), company's internal and external knowledge could be organized to become more effective (Dalkir, 2017) and knowledge could flow efficiently (Nissen, 2004) to meet its KPIs e.g., TAT and QoS. The firm was recommended to consider a Business-KM-Fit Strategy as per Greiner et al. (2017) as it was a similar type of services firm being studied. The business strategy identified after the interviews, to address TAT and QoS were top management commitment and willingness to invest resources in KM processes, drawing of concept of competency for experts in knowledge and assessment, make data available an accessible via online tool (mobile application) for every personnel involved in the particular job, laboratory consumables planning inventory versus budget, and monitoring of calibration and upkeeping of laboratory equipment.

As the current status of KM in the firm was relatively at a young age, the recommendation was to start at pilot scale of the KM phases because successful KM would start small and grow. It could start with an overall strategy and plan, and then moved to pilots which small parts of the firm could be brought in, so that lessons could be learned and adjustments made at the people, process and supporting technology were implemented across the organization (Barnes, 2018). There was no company which could realistically aim to be active in all four stages of the KM process (Birkinshaw & Sheehan, 2003). The KM processes detail recommendations from literature review using Davenport and Prusak (1998), Staab et al. (2001), Fong & Choi (2009) and merged them into current KM practices; keeping in mind the firm's findings on its KM status:

Knowledge creation
- Invite experience staff to record their knowledge and experience, including customer complaints sharing where currently practiced
- Encourage experts to identify best practices which the firm has implemented for future use during the firm's existing best practices sharing sessions
- Existing knowledge at workplace is used to develop new knowledge in current focus group discussions

Knowledge storage
- Data and information from knowledge creation processes above, customers' data, issuance of reports and certificates were selected and organized before being stored because the retention of knowledge required organization to identify and code them (Gonzales & Martins, 2014)
- Knowledge was recorded by electronic means, not only in paper medium
- Enable access for experts to be able to find knowledge when needed

Knowledge distribution
- Assign experienced and high qualified experts to mentor new and less experienced staff
- Make accessible knowledge gained from different projects to all experts
- Have knowledge transferred electronically in addition to surveyors and analysts asking their seniors and follow steps of seniors; with current MAYA system upgraded or expansion, or online application on mobile or devices to include QC checks and connect all personnel related to the job
- Provide remote access to workplace database, so that the branches no longer use WhatsApp, and have access to real time data.
- Continue on providing Internet access as external KM Source (Kumar & Kumar, 2015)

The fourth theme was that the firm's experts were in need of training and development of technical skills as well as soft skills. The next recommendation was training and development program for the firm's experts where almost all the respondents mentioned this was required and; the first initiative to KM were human resource development (Chen & Huang, 2009) for knowledge acquisition (Gonzales & Martins, 2014). KM processes required the organization to hire and train individuals so that they were knowledge capable to contribute to organization knowledge (Cardoso et al., 2012). Employees' skills, experience, cognition and learning abilities influence the success of KM (Lystras & Poulodi, 2006). In addressing behavior issues of experts, organization must build a participatory internal context where employees were motivated to collaborate (Chen & Huang, 2009) and expressed appreciation (Lopez et al., 2006). The firm should invest in its employees because KM was moving from technology to employees where employees would be the center of gravity for KM (Weidner, 2018). Some form of teamwork could be seen since the newer and lesser experienced experts could rely on senior experts' guidance to accomplished their jobs, which were an important construct in KM (Gonzales & Martins, 2014). Therefore, it was concluded the firm top management should play a stronger role in KM initiatives and programs, which in return, they would be able to improve its TAT and QoS.

6. CONCLUSIONS

In conclusion, four themes were generated from this study, mainly the heads of branches and divisions supported and committed to KM, low KM management, lack of top management commitment and the firm's experts need training and development through a qualitative interview method and thematic analysis. The professional services firm in Indonesia status of KM was still low and at an infant stage in meeting its quality of work, namely TAT and QoS, which was agreement with studies conducted earlier on SMEs and logistics service providers (Bencsik & Pawliczek, 2016; Wahab et al., 2021). Results also showed the reasons of low status being insufficient top management commitment and unwillingness to invest in KM program, no proper

follow-through and absence of training and development concept for their 'experts'. The firm should move forward in KM initiatives and program, have commitment and willingness to invest in KM resources from the top management, remove identified KM barriers. The firm could start small and in phases; in knowledge acquisition, knowledge storage and knowledge distribution. It could consider a Business-KM-Fit Strategy as explained earlier. It was recommended to be combined to its business strategy to increase experts' competency, invest in upgrade or expansion of its current KM tool to provide real time data, improve laboratory inventories and equipment maintenance program.

The limitations of this study where the interviews were conducted on heads of branches, where it could have included survey on the 'experts' themselves using a quantitative survey method, to provide more hypothesis to be tested. Other limitation was this is for a professional service firm, and may not apply to other services or industries. The implications of this study for future research were to understand KM processes in detail manner in surveyors and samplers, conduct questionnaires to the professionals who were doing the actual work, and explore if KM was affected by individualism-collectivist society. This study only covered certain employees in the operations department, and future study could look at other positions or other departments.

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APPENDIX 1

Interview Questions and Answers tabled for analysis

	Interview Questions	West Java 1	Sumatera 1	Kalimantan 1	West Java 2
1	Level of understanding of KM	High	Medium	High	Low
2	Would implementing KM improve TAT and QoS?	Yes	Yes	Yes	No
3	What do you think about current operation performance, especially TAT and QoS?	Average	Not Satisfactory	Not Satisfactory	Have constraints
4	Was there any improvement effort to increase operational performance, especially for TAT and QoS?	Lack of effort at branch	Yes but only incidental	Partial	Maintenance issue
5	Do you think all of the experts were in compliance?	Follow senior	Follow senior	Follow senior	Somewhat comply
6	Do you think the organization supports on providing resources for KM development?	No	No	No	No
7	Are you committed to be involved in KM initiatives?	Yes	Yes	Yes	Yes

TABLE 1: Interview results summary for first four respondents.

	Interview Questions	Sumatera 2	Kalimantan 2	Marine	Coal	Petrochem
1	Level of understanding of KM	Medium	High	High	High	High
2	Would implementing KM improve TAT and QoS?	Yes	Yes	Yes	Yes	Yes
3	What do you think about current operation performance, especially TAT and QoS?	Average	Good	Average	Average	Good
4	Was there any improvement effort to increase operational performance, especially for TAT and QoS?	Partial	Partial	Partial	Full Yes	Partial
5	Do you think all of the experts were in compliance?	Somewhat comply	Comply because have ISO	Different method of reporting from different branches	Comply but inexperieced	Comply
6	Do you think the organization supports on providing resources for KM development?	Yes	Yes but not optimize	Yes but not optimize	Maybe	Yes but not optimize
7	Are you committed to be involved in KM initiatives?	Yes	Yes	Yes	Yes	Yes

TABLE 2: Interview results summary for next five respondents.

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APPENDIX 2

Interview Questions

No	Interview Questions
1	What do you know about Operation performance especially for TAT and QoS?
2	What do you know about knowledge management?
3	Could you explain whether by implementing knowledge management then TAT and QoS, operation performance could increase?
4	What do you think about current operation service performance especially for TAT and quality of service?
5	What do you think about current improvement to increase operational performance especially for TAT and quality of service? Ie any improvements?
6	In your opinion, what problems or challenges are causing TAT complaints and QoS?
7	What do you think, is there any influence of external factors such as policy, encourage from superiors, coaching, endorsement management, etc. can strengthen employee involvement in KM program?
8	Do you think all of experts comply with the procedure, is there any issue about compliance?
9	Do you think the organization supports the facility or asset for the development of Knowledge Management?
10	Are you committed to involve in KM improvement as the part of best practice KM implementation?

A Historical Approach on Individual Incentive Program In A Collectivist Society In An Indonesian Glass Lens Manufacturing

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Abstract

Transferring production operations overseas was a cost driven strategy and in glass bifocal lens manufacturing, high quality labor skills were required and yield targets were critical. Sensitivity analysis conducted showed three levels of yield drop would result in significant increase in costs of products. At the same time, major considerations were made due to cultural differences of individualist versus collectivist. Incentive programs, both monetary and recognition, were implemented to motivate assembly operators of production to achieve yield targets. The findings were while individual incentives continued to be paid out on monthly basis, the public recognition had to be removed. Individual public recognition was concluded as hindrance to achieving performance results in a collectivist society. In the end, the incentive program proved successful and the factory achieved its yields. Another importance collectivist trait observed were employees who obtained incentives were found helping their co-workers to improve their skills over coffee breaks. This paper used an evidence-based approach provided by the Management of the Indonesia factory.

Keywords: Incentive Program, Employee Recognition, Individualist Versus Collectivist, Glass Lens Manufacturing, Indonesia.

1. INTRODUCTION

The company which transferred glass bifocal and trifocal production from United States of America to Indonesia deployed employee incentives program; was studied on an evidence-based approach over a year, covering the aspects of individualist-collectivist societies (IND-COL).

This paper aimed to address what would be the effective rewards program for a company that had transferred its operations from an individualist society to a collectivist society. This was important as the well-established company needed to meet its manufacturing performance goals in terms of meeting target yields in new manufacturing location, and with serious consequence because if it is unmet, this would be reflected in increase of costs. There were several types of employee rewards program and chosen for this study was individual incentive and employee recognition. This study used a more in-depth concept of IND-COL which included the horizontal and vertical dimensions to be more explicit in the discussion. The concepts of horizontal and vertical dimension of IND-COL followed were works done by Gyorkos et al. (2013); Singelis et al., (1995) and Triandis et al., (1986). In rewarding employees, Sprinkle (2000) stated that incentives significantly enhanced performance. The company who participated in this study implemented

incentives program, because being a new set-up with newly hired employees, incentives would increase the rate of learning and accelerate learning curve (Sprinkle, 2000). The company also needed employees to use resources more effectively and efficiently as their requirements were costs driven; which incentives could motivate on this level. The company also had to effectively keep the employees that they took time and effort to train and incentive programs were found to retain employees (Aguinis et al., 2012).

This study was proved useful as the company which participated in this study was willing to make real time changes to revise the rewards program should it be found not working. The company did not have to wait for year-end manufacturing closing or employee appraisal. The changes made within the study period made the findings of this paper significant.

The implications of this research were that practitioners could consider implementing similar rewards program for high-skilled labor in manufacturing. This paper gave insight of the type of rewards program that would be effective in a horizontal collectivist society.

2. LITERATURE BACKGROUND

2.1 Industry History

Until the 1960s, growth in the ophthalmic goods industry had occurred at a steady, predictable rate, largely dictated by the rate of population growth in the United States of America (U.S.). During the 1960s, however, an increased demand for optical products elevated industry sales levels to unprecedented highs, prompted by greater availability of eye examinations and the development of contact lenses to be used in place of eyeglasses. The 1960s sales were boosted by the country's federal programs like Medicare and Medicaid which helped pay for eye exams for the elderly and the poor (Encyclopedia, 2019). Pricing of corrective eyewear became an ongoing concern for U.S. government regulators where a number of states prohibited advertising of eyewear prices. This resulted in prices averaged 25% higher than in states with no restrictions. In the late 1970s the US Federal Trade Commission moved to end all advertising restrictions to level out pricing practices which succeeded to create a more price-driven eyewear market (Encyclopedia, 2019).

Worldwide, vision represented an estimated USD36 billion-dollar industry comprised of services (approximately USD15 billion) and sale of corrective eye glasses and lenses (approximately USD21 billion) with steady expected growth of 1 to 2% (HarrisWilliams & Co., 2015). Modest, but steady growth of vision care services driven by the following key market trends: Aging Population Growing Coverage for Vision Care (HarrisWilliams & Co., 2015). Products and services in the eye care industry clustered around two goals which were refractive vision correction and treatment of eye diseases. Over 150 million Americans used corrective eyewear for refractive vision problems, with an estimated USD21 billion market for glasses and contact lens sales (Pathipati & Tsai, 2018). In the late 1990s, relatively small compared to most industries, U.S. optical supplies sector consisted of five main product segments: frames for eyeglasses, lenses for eyeglasses, contact lenses, sunglasses, and cleaning solutions and specialty products (Encyclopedia, 2019).

In addition to positive secular trends driving long-term growth, the vision market exhibited highly stable demand due to non-deferrable nature of service and corrective device purchases (HarrisWilliams & Co., 2015). Industry participants include independent opticians, optometrists, ophthalmologists, corporate providers/mass merchandisers, and glasses/contact lens manufacturers and distributors. Vision care providers compete based on service quality, patient loyalty, professional training, and personalization of service (HarrisWilliams & Co., 2015). Corrective device retailers compete based on location, merchandising, price, treatment technologies/products, and ability to franchise operations. Vast majority of vision service providers also sell corrective devices; a highly fragmented independent provider landscape (HarrisWilliams & Co., 2015).

Given that vision problems were more common as people age, demand for eye care was expected to correspondingly increase. For instance, there was a 20 to 25% increase in the number of individuals with cataracts, age-related macular degeneration, and glaucoma between 2000 and 2010. The growth in all three of these age-related eye diseases would only accelerate as the population gets older (Pathipati & Tsai, 2018). Lifestyle trends supported a greater need for eye care as well. Perhaps most significantly, there continued to be a pattern of poor nutrition and exercise in the U.S. Diabetes had therefore become increasingly prevalent. Between 1995 and 2010, age-adjusted incidence of diabetes mellitus increased by 82.2%. Diabetic retinopathy was the most rapidly growing major eye disease, with an 89% increase in prevalence between 2000 and 2010 (Pathipati & Tsai, 2018).

The successful development of lightweight, high-quality plastic lenses helped revolutionize the eyeglasses segment, particularly for consumers with stronger prescriptions. In the past, glass lenses tended to be heavy, and if a person's eyesight was worse than average, glass lenses quickly grew thick and were regarded by many as unaesthetic. Glass was then replaced by Plastics, which was lighter and able to offer more dramatic reductions in weight and thickness for stronger prescription wearers (Encyclopedia, 2019).

In terms of global presence, U.S. companies ranked among some of the world's largest optical goods producers, and many obtained significant shares of their annual sales from abroad, but they faced mounting competition from overseas competitors. Production of low-cost frames, and sometimes lenses, was increasingly more cost efficient in places like Asia, where lower wages translate into cost savings for producers. U.S. imports of low-tech eyewear typically dwarfed exports. For example, in trade of plastic frames and mountings, in 1997 the value of U.S. imports were nearly four times that of exports, and in trade of other frames and mountings U.S. exports were just a tenth of imports (Encyclopedia, 2019). In 2000, an Italian eyewear with a history of 700 years became a world leader with breakthroughs of new materials combined with new technologies and design (Luxottica, 2020). When imports were considered, the net US market for optical goods exceeds USD 4 billion, as a large share of US purchases were of foreign-made goods and approximately 500 US companies produced optical goods but, in terms of sales volume, the industry was dominated by a few large companies (Encyclopedia, 2019).

In area of employment, the U.S. optical goods industry employed approximately 27,000 people, of whom about 62 percent are in non-management positions. The industry's annual domestic payroll was worth more than $756 million and represents just over 20 percent of annual revenues. Employment in the industry had been slowly declining since the early 1990s and, on average, production workers at optical goods businesses earn less than the average manufacturing wage (Encyclopedia, 2019).

2.2 Individualist and Collectivist Society

Many studies on individualist and collectivist societies have been done in-depth; with major publication started from Hofstede in the 1980s. Hofstede (1980) defined individualism as a loosely knit social framework while collectivism was characterized by a tight social framework in which people distinguish between in-groups and out-groups. Individualism and collectivism represented abstract psychological concepts with core explanatory factors for social differences, constructed to explain patterns of events (Kim et al., 1994). In Gyorkos et al. (2013) study, the results were in line with Hofstede's (1981) results indicating that power distance and individualism are the most correlated constructs of culture out of his five dimensions.

An individualist was independent from social interaction, focused on rights above duties; more geared to achieve social status and with that more likely to be competitive and goal-oriented (Oyserman et al., 2002; Hofstede, 2001; Triandis & Gelfand, 1998). An individualist rationalized relationships based on cost versus benefits, where one would enter if found beneficial and would exit when the costs exceed the benefits (Singelis et al., 1995). In contrast, a collectivist displays

interdependence between individuals and groups; with his or her personal values emphasized the importance of building harmonious relationships with others and inclined to meet their obligations to the group (Triandis, 1995). Because in-groups were stable and impermeable (Oyserman et al., 2002), collectivists could establish strong bonds with in-group members. The key discriminating factors of individualism were self-reliance and separation from in-groups while collectivism key aspects were family integrity, interdependence and sociability (Triandis et al., 1988; Triandis et al., 1986).

Some studies were made to quantify these two societal cultures and such methods were relating to social groups such as friends, neighbors, co-workers and strangers (Matsumono et al., 1997; Hui, 1988;). It was Triandis and Singelis et al who proposed measurement based on vertical and horizontal dimensions; which resulted in four dimensions (Singelis et al., 1995; Triandis et al., 1986). The first dimension was Vertical Individualism (VI) where the individual was autonomous and saw each other as different and expected inequality; with self being independent and different from others (Singelis et al., 1995; Triandis et al., 1986). The second dimension was Horizontal Individualism (HI) where an autonomous self was postulated; however, with individuals more or less equal in status with others and self was independent and same as others (Singelis et al., 1995; Triandis et al., 1986). The third dimension was Vertical Collectivism (VC) where individual saw themself as an aspect of an in-group, however members in the in-group were different, with some having more status than others and self was interdependent and different from others (Singelis et al., 1995; Triandis et al., 1986). The fourth dimension was Horizontal Collectivist (HC) where the individual saw themself as part of the in-group, self was interdependent and the same as others (Singelis et al., 1995; Triandis et al., 1986). Other measurement methods were a number of measures of Individualism and Collectivism such as the INDOCOL scale (Hui, 1988) and the Self-Construct Scale (SCS) (Singelis, 1994).

In more recent study, Cozma (2011) stated that previous measures (Hui, 1988) had low reliabilities, but treating IND-COL as a multidimensional construct (Triandis & Gelfand, 1998; Singelis et al., 1995) the reliability increased bringing more confidence in the measure and the items of these measures taped better the underlying constructs they represented. This was one of the limitations of Hofstede (1980) measure which lacked correspondence between operational definitions of IND-COL and the items that Hofstede designated to tap IND-COL constructs (Cozma, 2011). Cho et al. (2012) stated that the empirical results provide support for horizontal collectivism and vertical individualism as important influencers of perceived consumer effectiveness. In Gyorkos et al. (2013) study, its confirmatory factor analyses provided satisfactory support to the original theoretical models for both the Horizontal Vertical Individualism Collectivist (HVIC), showing HVIC was an adequate instrument for the measurement of horizontal and vertical individualism and collectivism; confirming works by Singelis et al., (1995) and Triandis et al., (1986).

Trust was particularly important for firms with global expansion and market presence (Lane, 1998). Internal trust was the climate of trust within an organization, defined as positive expectations that individuals had about the intent and behaviors of organizational members based on organizational roles, relationships, experiences and interdependencies (Schockley-Zalabak et al., 2000).

Certain aspects of collectivist culture could inhibit trust formation as one of the main reasons could be distinction between in-groups and out-groups (Triandis, 1995). Collectivists preferred to belong to groups, and appeared to place group interests above individual interests because it was their long-term interest to do so (Yamagishi, 1998). In-group bias was learned where collectivist cultures encouraged individuals to trust in-groups more than out-groups (Yamagishi, 1998). With that, Huff and Kelley deduced individuals from collectivist cultures had a stronger in-group bias, resulting in lower individual's propensities to trust external partners (Huff & Keley, 2003). When collectivists must develop relationships with outsiders, they take great time care to

evaluate a partner and nurture the relationship so that the outsider could be brought into their in-group (Huff & Keley, 2003). For an organization of collectivist cultures to overcome cultural tendency to distrust outsiders in an increasing global economy, it was to expand the scope of their in-groups (Huff & Keley, 2003).

In implementing Western talent development programs in collectivist culture countries, there were challenges because of several specific cultural traits intertwined with the country's history, culture and values about the receiving party. As suggested by Lucas et al. (2018), the traits were employees' tenure with the company where the focus on tenure strengthens the sense of belonging; however it also pointed to an implicit assumption that one must prove his or her value before being able to influence change in the company. Secondly, egalitarian culture assumptions (where all people were equal and deserve equal rights and opportunities) could be a barrier to the implementation of meritocracy-based models (people selected according to merits) which left the question to leaders to decide to discuss with all or exclusively with talents (Lucas et al., 2018). Another trait was the company's culture of constant quest for excellence may result in excessive perfectionism and slow down decision making and action (Lucas et al., 2018). Implementation of a talent management system that was based on meritocracy principles in a collectivist country like Brazil; characterized by high power distance, collectivism, and emphasis on personal relationships over merit were challenging due to cultural obstacles (Lucas et al., 2018). Efforts had to be made for adaptation of imported concepts to the Brazilian context should embrace local cultural traits and contexts (Lucas et al., 2018). Using a meritocratic model in a high-power distance culture created conflict between employees as being selected for the talent pool also meant receiving special treatment, with differentiated access to exclusive developmental opportunities (Lucas et al., 2018).

2.3 Individual Incentive Program

Rewards payout based on individual performance were hypothesized to be an important antecedent of empowerment as rewards along with performance were significantly related to physiological empowerment (Spreitzer, 1995). Organization- and group-based rewards could be effective, however, often individual employees do not see a clear link between their actions, performance at higher levels and their subsequent reward (Lawler, 1992). To strengthen the link, individual performance and rewards could increase feelings of empowerment by recognizing and reinforcing personal competencies and providing individuals with incentives for participating in and affecting decision-making at work (Spreitzer, 1995). Empowerment was important as it intertwined with Lucas' findings that the hallmark of a company's history and culture is the autonomy of working cells (Lucas et al., 2018).

According to Sprinkle (2000), incentives significantly enhanced performance (with controlled duration of effort) and incentive-based compensation contracts increased the rate of learning and accelerated the learning curve. Evidence that monetary incentives increased effort and performance was consistent with the results of experiments where the task is more physical than cognitive (Sprinkle, 2000). These findings made firms motivate employees to use resources more effectively and efficiently. Incentives increased intensity of effort where it improved individual's analysis and encouraged them to develop strategies to maximize performance, motivating individuals to work smarter (Sprinkle, 2000). The above contradicts findings from Kohn (1993) stating that monetary incentives increase pressure and discourage risk-taking, creativity and innovation. Flexible manufacturing practices, just-in-time production methods, and total quality management had increased frontline workers with involvement in all phases of manufacturing processes (Banker & Potter, 1993).

Incentive programs were found to retain employees (Aguinis et al., 2012). This was important to organizations because the cost of turnover of employees was one and a half to two times of the salary of the employee (Holliday, 2021). The general statistics showed that average employee turnover per year was 18% (Holliday, 2021) and Deloitte Indonesia reported average industry

turnover was 10% (Deloitte, 2019). It was difficult to maintain employee turnover in a factory at zero, because according to the Indonesian Manpower Act Number 13 Years of 2003 Human Rights Law, everyone had the right to obtain a decent livelihood by leaving their current job for another (Yayat, 2018).

2.4 Employee Recognition
Recognition of results was expressed in formal manner for example, incentive bonuses when specific objectives were achieved, ceremonies to highlight special achievements and performance evaluation meetings; and informally like peers spontaneously congratulate an employee who had tackled a major task or a manager saluting a job well done at a team meeting (Brun & Nugas, 2008).

Studies had shown employee recognition was an essential component for motivation (Porter & Lawler, 1968; Vroom, 1964) and a component of meaningful work (Mow, 1987). It promoted on-the-job learning (Lippit, 1997), and contributed to employee job satisfaction, giving a positive impact on organizational productivity and performance (Applebaum & Kamal, 2000).

On the downside, recognition of results had perverse effects, such as jealousy, sense of unfairness or more competitiveness among employees. Therefore, recognition must be applied shrewdly and complemented with other signs of recognition (Applebaum & Kamal, 2000).

A lack of recognition at the workplace constituted the second largest risk factor for psychological distress and most employees expressed the need to be recognized by their superiors, co-workers and clients (Brun & Nugas, 2008). Brun and Dugas (2008) summarized recognition as a constructive response, and a judgement made about a person's contribution, reflecting not just work performance but also personal dedication and engagement where it could be carried out on a regular or ad hoc basis, expressed formally or informally, individually or collectively, privately or publicly and monetarily or non-monetarily.

2.5 Manufacturing Analysis
There were several manufacturing analyses and models based on stochastic processes. In the study of Azadeh et al. (2014) on integrated health, safety, and environment and maintenance systems, multivariate analysis was used for continuous performance assessment and improvement of these systems which was an approach to help policy makers and top managers. Teeravaraprug and Cho (2002) explored the process target problem with the consideration of multiple quality characteristics. Shao et al. (2000) examined several methods for process target optimization when several grades of customer specifications were sold within the same market. To determine the optimal process target and variance, Al-Fawzan and Rahim (2001) applied the Taguchi loss function. Cho (2002) found that when historical data concerning customer loss associated with product performance were available, a quality loss function using a well-established statistical method, such as regression analysis, might be a more practical alternative procedure in studying optimum process target.

Sensitivity analysis helped to identify those elements of the system that exercise a high degree of leverage on system behavior. Sokolowski and Banks (2010) defined sensitivity analysis as the study of how uncertainty in a model's output can be assigned to the various sources of input uncertainty. The sensitivity analysis was important to help uncover model errors and identify important bounds on input variables, identify research priorities and simplify models.

According to Bowling et. al. (2004), it was beneficial to perform sensitivity analysis to illustrate the possible impact of estimated parameters on the optimal process mean and the optimal expected profit in real world industrial settings. By varying the cost parameters, for example, such as scrap cost, rework cost, process mean, and process standard deviation, the sensitivity analysis

displayed the behavior of the optimum process target under different conditions (Bowling et al., 2004).

In Pokoradi (2016) study on simulation-based sensitivity analysis in operation and maintenance in the automotive industry, a matrix-algebraic method can be used for investigating these processes with systems approach analysis after determining probability changes of operational states and setting up the transition probability matrix. From the mathematical point of view, maintenance was a discrete state space stochastic process without after-effects, so it can be modelled as a Markov-chain. The analysis of maintenance systems and processes was to assist in decision making in maintenance management (Pokoradi, 2016).

3. METHODOLOGY
3.1 The Eyeglass History
Tracing the American Optical (AO) lineage, the first glass bifocal example would that of the cemented wafer and the method to produce a bifocal was common at the turn of the 20th Century; where the bifocal was produced by cementing the segment wafer or "add" onto the single vision "distance" lens as designed by Ben Franklin (Jobson, 2015). Cementing the add power onto the lens became a practical early method to produce bifocals, and was introduced by AO in the mid-1880s. The lens and reading addition illustration demonstrated how wafers were literally added to the base prescription lens to produce a bifocal. The "addition power" was actually cemented and called as"add power" (Jobson, 2015). A multifocal lens was either a bifocal or a trifocal wherein the "Add" (or the reading power) was fused to the distant power "lens blank". Historically, fused glass lenses were manufactured from two pieces of glass of different density, which were fused together. Glass in the reading segment had a higher index of refraction to provide additional plus power (Jobson, 2015). Along with the fashion statement eyeglasses were becoming, advancement in lens technology brought progressive lenses (no-line multifocal glasses) to the public in 1959. Almost all eyeglass lenses are now made of plastic, which is lighter than glasses and breaks cleanly rather than shattering in shards (Surrence, 2013).

3.2 The Company History
There are only a few manufacturers in the world which could produce multifocal glass lenses. Founded slightly over 90 years ago, an American eye care manufacturer based in St Cloud, Minnesota produced glass lenses that met industry standards. For 50 years, glass lenses produced had qualities of high optical clarity, high scratch resistant, long lasting lenses material, less susceptible to extreme temperatures, high-index options for thinnest profile and full features for tinting and photochromic treatments. The manufacturer also started production of plastic lenses. It was the first major ophthalmic lens company to introduce prescription polycarbonate lenses. In the 1990s, it was the first to launch progressive lens, polarized lens and premium high-performance lens which won an industry award.

In 1997, the company opened a factory in Jakarta, Indonesia with the primary purpose of transferring its glass manufacturing from United States of America (U.S.) to Indonesia because it was uncompetitive to produce at in the U.S. Several countries in Asia (China, Thailand, Indonesia) and South America (Brazil) were considered however Indonesia was chosen with favorable investment climate and the local partner selected had some experiences in similar technology. The glass lens production involved a highly skilled assembly operation and final yields of the lens are dependent solely on the operator's expertise. In order to be cost competitive, it was important that similar yields were achieved as those that were achieved at their U.S. factory. This was because material costs were a major component in the overall cost structure of the product, especially in "Photo Grey"or "Photo Brown" lenses which had a photochromic property and activate/deactivate for outdoors (in the sun) or indoors. The raw materials "lens blank" for both distant and "Add power" were manufactured by Corning in France and came at premium prices. So, it was critical to ensure that appropriate yields were achieved.

Drawing upon literature background presented earlier on industry analysis, company history and literature review, this case study was to find out if individual incentive programs and employee recognition would contribute at a company level. The sensitivity analysis was chosen as most suitable for this study because it could illustrate the possible impact of cost parameters under different conditions (Bowling et al., 2004) and since this study was about the assembly operators that were highly skilled dependent, there was a level of uncertainty of the input of work done the operators (Sokolowski & Banks, 2010).

A company cooperated in this study and data was collected on a monthly basis on the target yields achieved by each assembly operator and amount of incentive paid out. The sensitivity analysis was determined by the factory management and calculated based on their costs versus target yields. The output achieved by every operator was recorded on a daily basis and then averaged out to monthly for incentive calculation. The study took place over one year.

3.3 Factory Key Requirements

The factory infrastructure, layout and processes were designed with assistance and expertise from U.S. personnel. All equipment and tooling were transferred from the U.S. factory. Only spare parts were locally sourced. Essentially a like-for-like equipment-copy approach was utilized to ensure smooth and successful setup and start-up. For raw materials, the exact same components were used, primarily imported, including specific consumables, in order to provide consistency. Only common chemicals were locally sourced.

For learning of processes or Standard Operating Procedures (SOP), Indonesian employees were sent to the U.S. to be trained in a 2-to-4-week window in specific key processes. Trainers were also sent from the U.S. to Indonesia for actual hands-on training. SOPs were established and translated from English to Bahasa Indonesia.

The Assembly operation was a critical operation. This was a Newton Ring technique, wherein the fused Bifocal Button was correctly placed on top of a Glass Blank so as to minimize/eliminate light infringes and thus produce a perfectly assembled piece, to be thermally fused as the next step. This next step was an irreversible process thus it is important to get this done correctly. Any mistakes and the resulting product would need to be scrapped. Extra training manuals with videos and other aids were prepared and employees were specifically trained for this. An explanation of the Glass Bifocal Assembly Technique using the Newton Rings Method produced in the factory was shown in Appendix 1. The process of the glass assembly was found in Appendix 2.

3.4 Initial Outcome

The cost of product analysis was made by the Factory management which consisted of material, labor and overhead costs for Photo and White lens; based on average cost of product per piece. For Photo, the yield target for material was 58.68% and for labor & overhead at 30.06%. For White, the yield target for material was 34.92% and labor and overhead were 47.32%. A sensitivity analysis was conducted to show an increase in costs if yields dropped by 10, 20 and 30%. If the yield loss for Photo at 11.26% dropped 10%, the increase in costs would be 11%, if yield dropped 20%, the cost would increase by 25% and if yield dropped by 30%, the increase in costs would be 43%. For White, the yield loss was 17.77%; and therefore, if the yield dropped by 10%, or by 20% or 30%, the increase in costs were the same as Photo. The actual cost of Photo Lens raw material was double that of a White Lens raw material, so it was critical that yields were brought under control, especially for the Photo lens, because such drops in yields were making it a net-loss situation. The sensitivity analysis showed it was critical to meet the target yields required.

	Target		-10% change in yield		-20% change in yield		-30% change in yield	
	Photo	White	Photo	White	Photo	White	Photo	White
Material	58.68%	34.92%	52.81%	31.43%	46.94%	27.93%	41.08%	24.44%
Labor & Overhead	30.06%	47.32%	27.06%	42.58%	24.05%	37.85%	21.04%	33.12%
Yield Loss	11.26%	17.77%	20.13%	25.99%	29.01%	34.21%	37.88%	42.44%
Increase in cost	-	-	11%	11%	25%	25%	43%	43%

TABLE 1: Sensitivity Analysis on Increase in Costs if Yields Dropped by 10%, 20% and 30%.

It was expected that similar yields would be achieved since the total technology (design, equipment, raw materials and consumables) were transferred from the U.S. The average yields achieved in the U.S. were between 88% to 92%, since it was a highly skilled precision work. However, in reality yields in Indonesia varied between 60% to 95%, with an average yield of only 70%; which were below expectations. Upon further investigation it was observed that the yield varied significantly between the assembly operators at the Indonesian factory, which was a key process. While the variation was significantly lower amongst operators at the U.S. factory.

4. RESULTS
Similar individual yield issues were observed during the start-up operations at the US factory, so an individual incentive program was customized to reward employees with consistent yields while attaining the required productivity. This was consistent with studies by Sprinkle (2000); Spreitzer (1995) and Lawler (1992). On an organizational level, the concern for employee recognition was expressed through policies and programs stating the organization's intention to recognize the work performed by its members (Brun & Nugas, 2008).

It was proposed that the individual incentive program be established at the Jakarta factory for its 32 assembly operators. The age range of the assembly operators were 17 to 30 years, with a majority of 84.4% in their 20s. Majority of them, 50%, finished junior high school and 21.9% finished senior high school. The remaining 18.7% of them graduated from senior high school of economics and 9.4% of them graduated from senior high school of engineering. They were employed at least one year before the incentive program started.

The criteria were set as follows; firstly, they must assemble the minimum requisite number of pieces as per their established quota. The reason was to ensure it was fair that the personnel were not beating the system by taking additional work time getting their job done (as they were entitled to overtime pay). When the first criterion was met, then each assembly operator was given a unique number and their product was tracked all the way to the final inspection, where the actual yield was determined. Then depending on the actual yield achieved for that particular operator, an incentive was provided for every 1% additional yield achieved with no cap. The Management placed no cap as 100% yield was impossible anyway.

The target yield would be set for two products; the yield for "Photo" products and the yield for "White" products on a monthly basis. With that, two incentives were decided based on two yieldtargets, Photo and White, and the amount of incentive was based on yield achieved or not achieved. There would be a lesser incentive amount for yield drop below 10%. However, if the yield drop was more than 10%, based on sensitivity analysis done, then there would be no incentive payout as the increase of costs would be too high.

Initially yields started improving in the second month by 4.8% after the incentive program was introduced and for the Management, it was possible to distinguish between the high and low
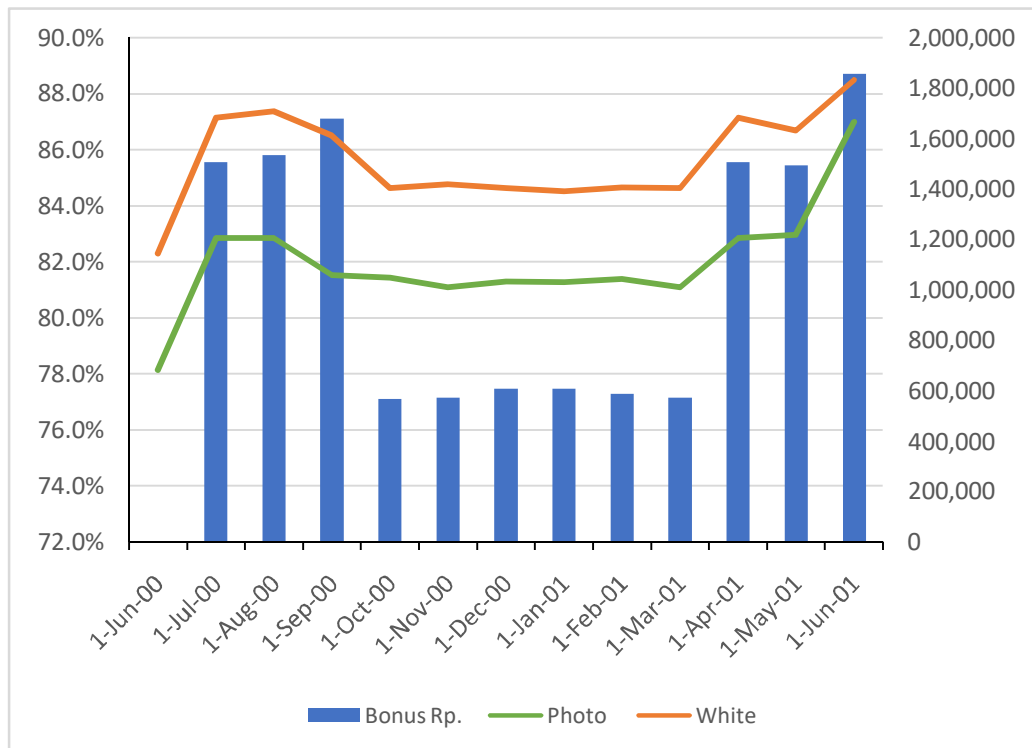
performers. The high performers were very pleased as they were getting additional monetary rewards. In the second month, the high yield result was maintained and the Management gave a public recognition to high performers in a ceremony at the Factory. The high performers were the same persons since the incentive program started, meaning they were able to perform from the start, and consistently. They made up 45%, 46% and 48% of the total group who received the incentives in the first three months of the program. Going into the fourth month, the yields dropped 1.1 % after that and the percentage of those receiving incentives dropped to 19%. For the next six months the yield result continued at low levels; the percentage of those receiving incentives remained at 19 to 20%; even with continual incentive program and public recognition.

The Management was taken aback with the results, and they investigated what could be the reasons for the drop. They communicated with the supervisors and assembly operators via meetings and dialogues, in groups and one-to-one. The Management had built internal trust with their supervisors and assembly operators which was important and in-group trust was higher within an organization (Schockley-Zalabak et al., 2000; Triandis, 1995). Feedbacks and responses pertaining individual competencies were evaluated and this was possible because collectivists placed importance on integrity as well (Triandis et al, 1986). Technology transfer and skills training given were reflected because the effect of implementing a meritocratic-based model in a collectivist society (Lucas et al., 2018) was in question.

As the high performers were able to achieve before, therefore, quality and materials of training were not in question. The Management eventually found out that some of the collectivist traits were displayed as to how it affected the incentive program which recognized individual performance. Indonesia as a collectivist culture country, in comparison to the U.S. which is an individualist country according to Hofstede (2018). In addition, the glass assembly process was highly skill dependent which meant individual assembly operator performance was critical. Therefore, the idea to reward all employees if overall results of target yield were met was considered but concluded not practical for reasons mentioned before. To remove the incentive program would result in risking target yields not met; or worse risking increase of costs, and employees would be demotivated. Careful probing was carried by the Management as to how to improve the incentive program. This was done with care as in-groups were stable and impermeable (Hofstede, 2001) and the assembly operators being in a collectivist society would prioritize maintaining a harmonious relationship among them (Triandis, 1995). The Management realized the public recognition exercise had to be reconsidered because they realized their group was more of a Horizontal Collectivism (HC) where the employees felt they were part of the in-group, and self was interdependent and the same as others (Singelis et al., 1995; Triandis et al., 1986). Public recognition action would take away the status of the same as others. Collectivists established strong bonds with in-group members (Oyserman et al., 2002) and would place group interest above individual interests (Yamagishi, 1998) which explained why most of the high performers gave up their incentives during the six months of low results, and finally to avoid public recognition. In the end, the Management decided to try to remove the public recognition, however continue to pay the individuals who achieved and placed the monetary into their payrolls. This meant employee recognition was still given monetarily on a regular basis, however, the public compliments to high performance were removed and given privately when deemed suitable.

The results of removing public recognition were the yields immediately shot up 2.2% the following month and the earlier same high performers were "back" to receive their incentives. The high performers admitted they were not comfortable with public and individual recognition as it made them feelthey were being treated higher than and "singled out" from their in-groups. They viewed their relationship with their co-workers more important than achievements. The few high performers continued to excel because they needed the incentives because money was tight to support their families. The next month showed an increase of up to 45% the total group managed to receive their incentives. In the 12th month, the yield was at its highest with an increase of 2.9%

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and the percentage of employees receiving incentives were also the highest at 52%, which now became the majority of the assembly operators. This was summarized in Graph 1.

GRAPH 1: Incentive payout in Total versus Yields of Photo and White for 12 months.

Other collectivist traits observed by the Management was that the high performers were seen coaching and showing tips and tricks to their co-workers i.e., the low performers during breaks; rather than taking breaks. According to the Management, this was in contrast with the U.S. factory where the workers did take their breaks when it was break time. This was because individualists focused on rights (to coffee breaks) and rationalized relationships based on cost versus benefits (Singelis et al., 1995; Kim et al., 1994).

The success of the incentive program helped the Company to retain the employees for certain numbers of years (Aguinis et al., 2012). There were about 6.2% employees who resigned in less than 2 years, which in comparison to the reported average 18% employee turnover by Holliday (2021) showed a good result for the Company. Majority of the employees, 37.5%, stayed for two to four years. Those who stayed four to six years were 21.9% and those who stayed for six to ten years were 25%. The Company enjoyed good employee retention. The breakdown of employees' years of service as followed: -

Length of service (years)	Percentage of Employees (%)
Below 2	6.2
2 to 4	37.5
4 to 6	21.9
6 to 10	25.0
Above 10	9.4

TABLE 2: Percentage of employees by years of service.

Another observation was the innovation level did not grow as expected, in comparison with their U.S. factory. Future research could be looked into innovation factors in terms of individualist-collectivist cultures.

5. DISCUSSION AND CONCLUSION

Taras et al. (2015) indicated that the dimensionality of individualism-collectivism may depend on (a) the specific instrument used to collect the data, (b) the sample characteristics and the cultural region from which the data were collected, and (c) the level of analysis.

Collectivist nature ingrained in Indonesian culture superseded individual achievement and individual recognition. The incentive program was successfully designed and implemented to achieve the desired results within an Indonesian cultural context by continued incentive payout in the monthly payroll and removal of public employee recognition ceremony. It was concluded while it was important to give employees its due recognition, public recognition was a hindrance in a collectivist society. The extent of the hindrance was that the employees gave up their incentives and thus Company target yields were not met; which was quite drastic as it affected the employees' earnings and Company's costs were at risk of increase. For the twelve months, the factory produced about 5.4 million pieces of glass lens, which was high output by industry standards of that period of time and met Management expectations.

The incentive program did not continue, as the glass assembly line was discontinued and scaled down tremendously. This was because of the rise of plastic materials at that period of time. Plastic lenseswere lighter and could also be made to better resist breakage than glass and, when treated with coatings, could help reduce the glare associated with traditional glasses. These enhancements helped drive strong sales of the newer technologies, and in large part these sales came at the expense of reductions in demand for older materials ie. glass (Luxottica, 2020).

The employees from Glass assembly were moved to a new plastic - polycarbonate production line. However, the incentive program did not continue because the polycarbonate production line was significantly more automated due to injection molding and coating equipment, and reliance on human labor skill was less significant than the assembly operation in Glass. Therefore, the individual incentive program would not be suitable and effective in the new production scenario. However, the Management understood employee rewards were still key motivators in achieving production objectives, and a different type of incentive program was introduced. Simultaneously, the assembly operators from Glass were fine with disbanding the individual incentive program and gladly accepted the different type of incentive program, which was a gain share team-based approach. This was because the team-based incentive approach was closer and more connected to collectivist traits. This was in agreement with Appelbaum and Kamal to apply incentive programs shrewdly and along with other signs of recognition (2000). This study's conclusion was in accordance with the review of organization and management theory (Cristofaro et al., 2021).

In going forward, the Management to this day continued to provide training and information sharing, because each employee was expected to seek his or her self-knowledge and self-development so that the company could have pipeline succession on both technical and managerial careers (Lucas et al., 2018).

The limitations of this research were gathering evidence of the actions taken by the Management of the factory to overcome the implementation challenges of rewarding their employees. The findings of the study would have benefitted more if the period of study could be prolonged, unfortunately the glass lens production had to cease operations. Further research could be done to draw hypotheses based on surveys or interviews on employee recognition using quantitative methods and explore employee incentive programs in other manufacturing sectors. For future research it was important to note as per Cozma (2011), that individualism-collectivism was a

dynamic concept because the culture shifts over time, hence what was true 30 years ago might not be true now, and what was true now might not be valid 30 years from now.

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APPENDIX 1

Glass Bifocal Assembly Technique using the Newton Rings Method

Concentric coloured rings, which appeared when two pieces of glass were pressed together, were commonly referred to as "Newton Rings". This phenomenon was discovered by an English physicist Sir Isaac Newton (1643-1727) from which it obtained its name.

The rings appeared when there was a tiny air gap between two pieces of clear material. Light rays encountered destructive interference if the gap was of a certain size relative to the wavelength, resulting in the effect. It was most pronounced if a convex lens was pressed up against a perfectly flat glass surface.

Glass which had been treated usually roughened very slightly to prevent Newton's rings from forming; was commonly called Anti-Newton glass. It was most often used with film and negative carriers in photographic enlargers. The roughening prevented the formation of tiny air gaps between the surfaces.
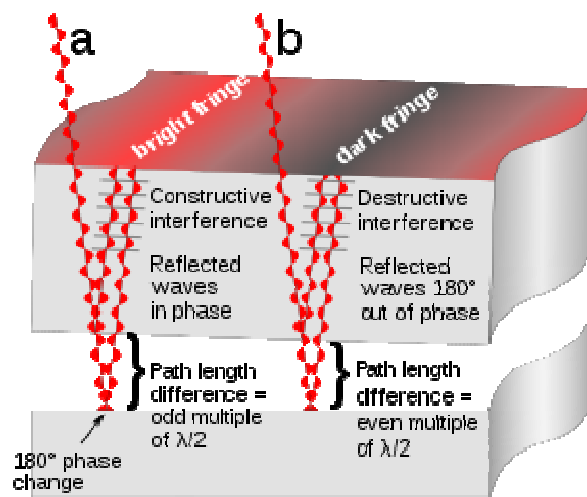
Closeup section of Glass Lenses.

Closeup of a section of the top glass on the optical flat, showing how interference fringes formed. At positions where the path length difference is equal to an odd multiple (2n+1) of a half-wavelength *(a)*, the reflected waves reinforce, resulting in a bright spot. At positions where the path length difference is equal to an even multiple (2n) of a half-wavelength *(b)*, (Lambda by 2)the reflected waves cancel, resulting in a dark spot. This resulted in a pattern of concentric bright and dark rings, interference fringes.

APPENDIX 2

Glass Multifocal Assembly.

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A Critical Study of Workplace Factors Determining The Engagement Of Generation Y Employees

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Abstract

According to Malaysia's Department of Statistic, Generation Y (also known as "Gen-Y") has now become the majority of employees within the workplace. Studies have shown that this generation of workers is different from the generations that came before them. Our study further showed that not all conventional wisdoms of what positively engage them in the workplace are proven, within Malaysia's context.Overall, the quantitative research has given us a total of 523 usable data that were collected through convenience and snowball sampling, administered via an online survey website. Using both multiple linear regression and one-way ANOVA statistical approaches, a set of valid and reliable independent variables were able to be tested. The study found that work-life balance (under leisure construct) and having friends at work (under social construct) do not positively impact engagement among Generation Y, whereas the remaining three constructs of extrinsic, intrinsic and altruistic have positive correlations. Additionally, the study has given the differences of factors determining the engagement that exist between generational cohorts; of Gen-Y, Gen-X and Baby Boomers. Through the study, even though we do not particularly study the correlation of workplace factors for the older cohorts, it is noteworthy to mention that as the generation becomes older, the more engaged they are in the workplace. Further research is recommended to study the data in understanding the correlation in determining the engagement factors that led to this observation.

Keywords: Generation Y, Gen-Y, Workplace Engagement, Employees.

1. INTRODUCTION

Successful and competitive organizations are expected to be able to manage the large generational cohort that is entering the workplace recently. The cohort known as Generation-Y ("Gen-Y") is gradually taking larger share and dominating the work environment in the labor

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market all around the world(Wang, Wang, & Li, 2018)(Arora & Dhole, 2018) and will form the majority of the employees worldwide(Chumba & Gachunga, 2016).The challenges faced by these organizations include unconventional remuneration packages, new ways of approach to work and how the workplace caters to them (PwC, 2011). Updating workplace's rules and policies is just one way a company does to create a conducive environment for them (Gursoy, Maier, & Chi, 2008). This is mainly driven by Gen-Y having a generally held different beliefs about the aspects of the workplace (Ng, Schweitzer, & Lyons, 2010).

Some of the changes already observed in recent years are 'interior-designer' level workstations and distinct corporate cultures (Ng, Schweitzer, & Lyons, 2010). All these are done with the objective of positively bringing up their engagement level. William Kahn (1990), in popularizing the term 'employee engagement', argued that engaged employees will bring with them "physically, cognitively and emotionally" to the workplace. Study showed that engagement matters in building positive employee attitudes towards a diverse generation workforce (Brightenburg, 2018). As one literature defined it, engagement is the company's ability to address issues and needs on behalf of the workforce(Avey, Avolio, Crossley, & Luthans, 2009). Engaged employees connect deeply with the organisation and provide discretionary efforts in their jobs (Krueger & Killham, 2006).

It is important to improve engagement of Gen Y at the workplace because it has a direct impact on: staff performance, financial performance of the organization (Horvathova, Mikusova, & Kashi, 2019) and higher customer satisfaction (Choudhury & Mohanty, 2019).With such impact on performances, the need to understand the factors that keep Gen Y engaged is important to possibly retain & fulfil their full potential (Liyanage & Gamage, 2020). Considerably, Gen Y employees opting to continue working with the organization depend on their engagement levels (Mahipalan, 2018). In one particular context, a survey of Malaysia employees conducted found Gen-Y to be the least engaged among other Asian workers (malaymail online, 2017).

However, measuring engagement level is just a superficial questionnaire conducted to assess the probability of the employees propensity in remaining within the same organisations. Engagement level per se does not measure the factors that really contribute to the engagement level. Engagement factors that directly correlate to raising Gen-Y engagement levels will immensely helpful for all organisations, and in particular the Human Resource practitioners. In addition, review of journal articles showed that the majority of studies on employee engagement are mostly conducted in more developed countries such as the United States of America.

Gen-Y career goals seem to be to build a parallel successful track as well as their own personal life. This is unlike the previous generations where building a successful life inadvertently includes a stricter adherence to almost exclusively building a singular career track. This could imply that external factors may have greater influence on job satisfaction of Gen-Y than any other generations before them (Hassan, Jambulingam, Alagas, Uzir, & Halbusi, 2020). Job satisfaction in turn has impact on turnover, and this directly impact the organizational agenda as the unintended excessive cost associated with the loss of productivity combine with the time and effort spent to replace the vacancies. An international HR company that measured such turnover found that it is costing billions for organizations in USA alone (Gallup, 2017). This itself has not taken into account the loss of productivity as people managers are totally distracted from their core tasks at hand. The global scale of such cost will be staggering in the least.

Therefore this study was conducted with 2 main aims in mind:- to review the hypothesis of workplace factors that could have impacted engagement levels, and to establish which of these factors do have correlation to increasing such engagement levels where Gen-Y is concerned. The basis for our study will seek to expand on the research conducted by Twenge, et. al.,(2010) as they have comprehensively proposed the constructs that group workplace factors affecting employee engagement but did not directly measure employee engagement as a dependent variable. Without this measurement, it will be difficult to convince organisations to adopt any of

the workplace factors as the basis to have such transformational changes may have cost and time implications. As such, due to locality, we have decided to focus on conducting a critical study of workplace factors determining the engagement of generation Y from the Malaysian employees' perspective. Overall, this study's objectives are divided into three (3); firstly, to determine the independent factors impacting engagement of Gen-Y employees; secondly, to measure the engagement level of Gen-Y employees and finally; to examine the significant difference in workplace engagement as compare with previous older generation cohorts.

Utilizing quantitative research methods, aquestionnaire was developed in Survey Monkey which was disseminated to targeted sample via social media. 523usable samples of Malaysian employees (with 74% of respondents among Generation Y) were then analyzed using Statistical Package for Social Science (SPSS) software. The results have shown that Intrinsic rewards (Beta = 0.363, P value <0.05), Extrinsic rewards and Altruistic rewards were statistically significant and are the key factors that impacts engagement level of Generation Y.This paper is expected to further the evidences that will impact both interested seasoned HR practitioners, as well as researchers to make the right choices in changing how workplace engages the majority of their employees meaningfully. This will promote morecritical rethinking on how job design is doneand to formulate strategies and company policies to modernize benefit schemes (such as flexible work schedule) as well encouraging one's company brand as altruistic(such as greater focus on environmental, social and governance).

2. THEORY AND HYPOTHESIS

There are a few differing definitions for the age bracket of Gen-Y as a cohort, due to unique historical events and experiences brought about by social changes (Ng & Johnson, 2015). For the purpose of this study, Gen-Y will be demarcated as those born between 1980 and 2000, generally a period found within most researchers' time span, as shown in Table 1.In 2014, Malaysia had approximately 7.4 million Gen-Y employees, representing 52% of the workforce(Department of Statistics Malaysia, 2014).

BIRTH-YEAR	SOURCE
1980 – 1995	Foot and Stoffman, 1998
1982 – 1999	Howe and Strauss, 2000
AFTER 1982	Twenge, 2010

TABLE 1: Compilation of Age Group Considered as Gen-Y.

There are bodies of study indicating that Gen-Y feels frustrated at the workplace and this essentially contribute to their frequent turnover in search of better working environment. Gen-Y faced multiple challenges at workplace, as indicated in their study by (Hassan, Jambulingam, Alagas, Uzir, & Halbusi, 2020). Employer satisfaction remains the key to retain their staying power. Job satisfaction is considered to be an essential factor in affecting the willingness of workers to stay in their workplaces. Job satisfaction is one of the tools used to establish and maintain the stability of an organization(Do, Budhwar, & Patel, 2018).

The findings of the study implicate that career preferences differ across respondents of the three generations. Generation X seeks for job opportunities which align with their career aspirations. They posit an inclination to work with those organizations which provide career opportunities which match with their career aspiration.

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The findings of the study implicate that career preferences differ across respondents of the three generations. Generation X seeks for job opportunities which align with their career aspirations. They posit an inclination to work with those organizations which provide career opportunities which match with their career aspiration (Chawla, Dokadia, & Rai, 2017). Findings of the study do not support the second hypothesis that there are intergenerational differences in reward preferences across generations. All the generations prefer materialistic rewards and consider high pay package as of the top motivator to work.As per the results obtained from the present study, work engagement follows a receding trend across generations, where the senior generation participants of the study posit high amount of engagement towards their work and organization followed by moderate engagement by generation X participants and lowest engagement by generation Y participants of the study. The current study finds that generation Y exhibits low work engagement scores (Chawla, Dokadia, & Rai, 2017).

It was found that employee satisfaction much more dependent on the extrinsic and intrinsic motivation that affect employee job satisfaction, remuneration being equal across. Providing quality of working life, good leadership style, regular training, employment security, company's image branding, and employees' personal traits, are deemed as more important aspect. With employees' satisfaction, there is a direct positive relationship with retention. A study conducted among employees in a 5-star hotel in Thailand showed just such a direct relationship (Ashton, 2018).The result shows that the intrinsic work motivation is an important issue for employee retention and especially among generation Y employees in the organization. Effective employee motivation and retention of skilled and talented employees should be the main aim of management. Huge turnover creates problem for not only the employers but also employees and clients.

Now the time has arrived to think out of the box and focus on intrinsic motivational factors which can also affects employee retention if properly used by the management (Mishra & Mishra, 2017).Developmental opportunity also represents a sticky aspect to retain Generation Y employees. The organisations must be committed to their overall human resource development, which should results in a positive reciprocal behavioural outcome, such as, an emotionally-anchored commitment to stay in that particular organisation (Naim & Lenka, 2018).

2.1 Hypothesis Models
Our constructs are replicated from the research done by Twenge (2010)as it is one of the most referenced journal articles and has studied the largest number (16,507) of subjects in relation to engagement throughout the generational cohorts. The following is the model of the constructs by which this study will be based upon:
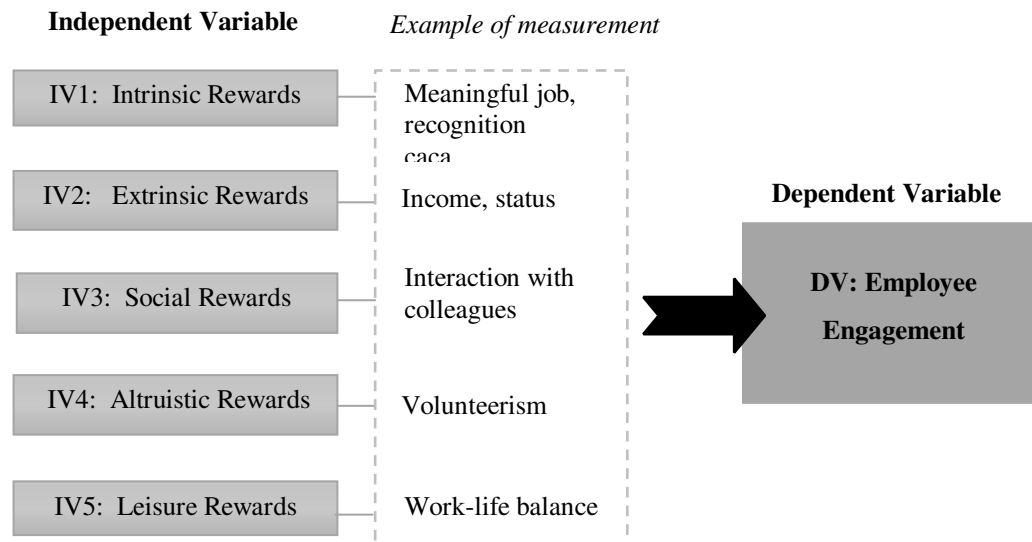
FIGURE 1: Conceptual Framework for Employee (Gen-Y) Engagement.

Intrinsic rewards are psychological accomplishment that employees obtain from performing meaningful work (Obicci, 2015). These are mostly in intangible forms such as meaningful jobs, employee recognition, acknowledgement, respect and appreciation (Ajmal, Bashir, Abrar, Mahroof Khan, & Saqib, 2015). Other intrinsic rewards such as learning opportunities, challenging work and career advancement were considered as high drivers of engagement (Aktar, Sachu, & Ali, 2012). Maslach et al.(2001) suggested that appropriate reward and recognition is important for employee engagement. Researches on Gen-Y showed that this generation's expectations are to have a fulfilling, interesting and challenging daily work(Arnett, 2007; Lancaster & Stillman, 2003). Against such extensive studies, therefore intrinsic rewards are an important part of employee engagement and should not be overlooked.With this, we propose the first hypothesis.
H$_1$: Intrinsic rewards have a positive impact on employee engagement.

Extrinsic rewards rely on tangible rewards, such as career advancement, monetary income and visible status (Queiri, Wan Yusoff, & Dwaikat, 2015). Studies have shown that Gen-Y is more ambitious and materialistic than the previous generations, and as such, expect near instant gratification in the form of promotions and salary increases (Ng, Schweitzer, & Lyons, 2010). Another study suggested that economic trend and higher cost of living has made Gen-Y to be more indebted and might place more emphasis on extrinsic rewards (Twenge, Campbell, Hoffman, & Lance, 2010).Hence, our second hypothesis.
H$_2$: Extrinsic rewards have a positive impact on employee engagement.

Social rewards are made-up of psychological pay-offs in relating with other people, such as having friends at work. Studies have shown that it is normal for Gen-Y to rely on social media to fulfill their social needs (Bolton, et al., 2013), that Gen-Y values workplace friendliness and being part of the team (Tolbize, 2008). A very recent survey done among Gen-Y suggested that they prefer their bosses to treat them like a friend (Hays, 2013). The continued blurring of traditional lines separating friends and colleagues may suggest Gen-Y's engagement can be affected by workplace social rewards (Pedersen & Lewis, 2012). A study by Schaufeli and Bakker (2004) shown that a certain measurement of job resources which take into account support from colleagues are correlated with engagement.For the third hypothesis, we propose **H$_3$: Social rewards have a positive impact on employee engagement.**

Altruistic rewards find meaning through helping the organization or the society it serves. Today many organisations have corporate social responsibility ('CSR') programs and they believe that these will encourage their employees to give back to society. There are evidences that suggest Gen-Y cared more about issues on environment and civil liberties more than their predecessors (Pew Research Center, 2011).The compatibility between an organisation's altruistic values & the altruistic desires of employees shows great organizational-fit (Brightenburg & Miller, 2018).The rates of volunteerism among youth has risen steadily over the years, and provides a clear indicator that Gen-Y are much more interested in participating in public spaces, given the right incentive and opportunity to do so (Delli Carpini, 2000).For our fourth hypothesis, we propose:
H4:Altruistic rewards have a positive impact on employee engagement.

Leisure rewards are opportunities to pursue relaxation time, vacation, and freedom (Herzog, 1982; Johnson M. K., 2002; Miller, Woehr, & Hudspeth, 2002). According to Johnson (2004), work-life balance is a significant factor in contributing to employee engagement; Lockwood (2007) further suggested that work-life balance even has a positive impact on staff retention. A study done by (Liyanage & Gamage, 2020)shows that work-life balance has a positive relationship with the employee engagement of Gen-Y employees. In comparison with Baby Boomers, Gen-Y value freedom and work-life balance more (Cennamo & Gardner, 2008; Twenge, 2010). Gen-Y value high leisure work values, favoring jobs that allow more time to travel (Twenge, Campbell, Hoffman, & Lance, 2010). Therefore, the impact of the importance of leisure at the workplace may compel organisations' approach to produce a fun and enjoyable workplace.We like to test this fifth hypothesis.
H5:Leisure rewards have a positive impact on employee engagement.

Studies involving all 3 generational cohorts (Gen-Y, Gen-X and Baby Boomers) have not been vastly available. However, some studies focusing on one or the other cohort are available, though the limitation faced is that inferences have to be made on the relative differences, if any, between the 3 generations regarding their workplace engagement. One study by Hoole&Bonnema(2015) showed that Baby Boomers are the most engaged comparatively with younger generations due to having attained higher extrinsic and intrinsic rewards in their twilight careers.Another study by (Brightenburg, Whittington, Meskelis, & Asare, 2020) also showed that Baby Boomers were more engaged followed by Gen X and Y.According to study done by White (2011), Baby Boomers were ambitious, competitive and dedicated, and can be assumed that this generation will most likely be more engaged in their job in order to achieve their career objectives as compared to other generations. With the limited existing research, this study would like to measure the differences between the generation cohorts.Our sixth hypothesis will be:
H6:There are differences between generational cohorts in terms of employee engagement.

3. RESEARCH DESIGN
A quantitative study was conducted through numerical evidence to establish causality. Secondly, the data collected was in ordinal form which requires a quantitative method for analysis. For sample design and data collection, the sampling frame covers working individuals in Kuala Lumpur & Selangor. According to the Department of Statistics Malaysia, these 2 states have an approximate population of 8 million people, of which 5 million of them are working individuals (Department of Statistics Malaysia, 2017).The population of this study was approximately 5.5 million working individuals. According to Krejcie& Morgan (1970), a sample size of 384 is representative of a population of 1 million; even if the population exceeds 1 million, the minimum sample size is still 384. Nonetheless, more than 384 samples were collected to remove possible sampling errors.This study sampling mechanism uses a combination of convenience sampling and snowballing. The reason for using convenience sampling is to enable the researcher to collect information from reachable respondents conveniently, whereas snowball method was used as respondents may introduce others to participate in the survey.

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For data collection, social media and apps such as WhatsApp and Facebook were used to collect responses. After the survey questionnaire was designed, a pilot test was conducted before the actual survey was distributed on a mass scale. Pilot testing was performed to assure the validity, reliability, and accuracy of questionnaires (Lancaster, Dodd, & Williamson, 2004). Thereafter, the pilot test samples were analyzed for reliability and validity using Statistical Package for Social Sciences (SPSS) software.A total of 580 questionnaires were collected, with 523 completed; hence the response rate was 90.2%. The questionnaires collected were screened to ensure that there are no unreadable and incomplete responses (Zikmund, Babin, Carr, & Griffin, 2010); incomplete questionnaires were excluded from analysis. The information on the questionnaire was coded, processed and analyzed using SPSS. In addition, a Normality Test was performed and outliers were subsequently removed.

In the questionnaire design, multiple items measurement scales were adopted and adapted from two studies; Twenge et al.(2010) for workplace factors constructs and Saks (2006) for employee engagement constructs. A 5-point Likert scale (1= strongly disagree, 5 = strongly agree) questionnaire was designed online using SurveyMonkey. The questionnaire contained 27 questions and was divided into three sections:

   i.   Part A to collect demographics information;
   ii. Part B to measure overall engagement level; and
   iii. Part C to measure the factors that affect the engagement level.

Please refer to **0** for the complete questionnaire. Based on the feedback received during pilot test, the questions in Part C were shuffled and the construct themes (intrinsic, extrinsic etc.) were removed to avoid biasness.

3.1 Data & Findings
In measures of reliability and validity, the Cronbach's Alpha reliability test from SPSS was used to examine the internal consistency in the scale of items or how closely related a group of items are(Golafshani, 2003). The six different constructs (Intrinsic Rewards, Extrinsic Rewards, Social Rewards, Altruistic Rewards, Leisure Rewards, and Employee Engagement) were tested for reliability. A score of over 0.70 shows a high internal reliability. The results are depicted in the Table 2.

No.	Variable	No. Of Items (Before)	No. Of Items (After)	Cronbach's Alpha
1	Intrinsic Rewards	7	5	0.827
2	Extrinsic Rewards	6	4	0.753
3	Social Rewards	6	6	0.747
4	Altruistic Rewards	6	3	0.850
5	Leisure Rewards	4	3	0.752
6	Employee Engagement	11	6	0.817

TABLE 2: Reliability Test Results.

Face validity is a subjective criterion reflecting the extent to which scale items are meaningful and appear to represent the construct being measured (does the scale appear to measure what it is supposed to). Content validity, on the other hand, focuses on whether the scale items capture the key facets of the unobservable construct being measured. It involves subjective judgment by the experts as to the appropriateness of the measurement (Khatib, 1998).   In this research, content and face validity were examined through the following   steps:

1. The questions were adapted from theoretically sound past research;
2. The initial questionnaire was reviewed by the qualitative supervisor who is a subject matter expert in the area (practiced HR Manager) who rated the item of its applicability across a variety of organization; and
3. The questionnaire was also has been tested by quantitative academician who rated the item in terms of its clarity and coherence;

A pilot test was done as a pre-test, by sample of 35 respondents who are similar to the study respondent. Subsequently, changes were made based on their comments and are discussed in pilot study results in **Appendix 2:.**

According to Brown et al (1993), discriminant validity is performed to ensure measures of theoretically related constructs correlate highly with one another; it also ensures that all items fall back into the predetermined construct. With factor analysis, the validity can be tested to ensure all items together represent the underlying construct well (Rattay & Jones, 2007).The value of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.920 > 0.5) shows that the sample is sufficient to perform the factor analysis. Furthermore, a significant result of Bartlett's Test of Sphericity ($p<0.05$) indicates that all 6 constructs do relate to one another enough to perform a substantial factor analysis. Table 5-2 below shows the KMO and Bartlett's Test results:

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.920
Bartlett's Test of Sphericity	Approx. Chi-Square	6591.067
	df	351
	Sig.	.000

TABLE 3: KMO and Bartlett's Test.

A principal component factor analysis was rotated using an orthogonal (varimax) rotation method with Kaiser Normalization and the items and factor loadings were displayed in Table 5-3 below. Originally, there were 27 items: Employee Engagement (6 items), Extrinsic Rewards (4 items), Intrinsic Rewards (5 items), Leisure Rewards (3), Social Rewards (6 items), and Altruistic Rewards (3 items). The results of factor analysis indicate the existence of 6 factors as originally conceptualized; Employee Engagement (4 items), Extrinsic Rewards (3 items), Intrinsic Rewards (6 items), Leisure Rewards (3), Social Rewards (3 items), and Altruistic Rewards (3 items). A total of 5 items were removed due to high cross loadings or loadings different from the original conceptualization.

Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
Part B: Engagement Level						
Q3 Employee Engagement	.801					
Q4 Employee Engagement	.782					
Q5 Employee Engagement	.755					
Q6 Employee Engagement	.787					
Part C: Workplace Factors						
Q2 Intrinsic Rewards		.528				

Q12 Intrinsic Rewards	.677				
Q13 Intrinsic Rewards	.567				
Q16 Intrinsic Rewards	.759				
Q18 Intrinsic Rewards	.579				
Q21 Intrinsic Rewards	.598				
Q3 Extrinsic Rewards					.747
Q6 Extrinsic Rewards					.622
Q10 Extrinsic Rewards					.625
Q4 Social Rewards				.773	
Q8 Social Rewards				.752	
Q11 Social Rewards				.785	
Q7 Altruistic Rewards			.718		
Q14 Altruistic Rewards			.787		
Q19 Altruistic Rewards			.723		
Q1 Leisure Rewards		.610			
Q5 Leisure Rewards		.811			
Q9 Leisure Rewards		.734			
Extracted Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization					

TABLE 4: Rotated Component Matrix.

Tests of normality compared the sample distribution to a normal curve. According to Osborne & Waters (2002), regression requires variables to have normal distributions; hence, the normality test is to affirm the data is suitable for regression analysis. As the sample size was large, skewness and kurtosis was chosen as the suitable method to measure normality (Joanes & Gill, 1998). According to George and Mallery (2005), acceptable range for skewness and kurtosis is within the range of +2 and -2; if the value falls within the range, the data is normally distributed.

Descriptive		Statistic	Std. Error
Intrinsic Rewards	Skewness	-.583	.110
	Kurtosis	.539	.220
Extrinsic Rewards	Skewness	-.121	.110
	Kurtosis	-.219	.220
Social Rewards	Skewness	-.366	.110
	Kurtosis	.118	.220
Altruistic Rewards	Skewness	-.169	.110
	Kurtosis	-.184	.220
Leisure Rewards	Skewness	.001	.110
	Kurtosis	-.562	.220
Employee Engagement	Skewness	-.372	.110
	Kurtosis	-.055	.220

TABLE 5: Normality Test Results.

A graphical representation of distribution observations were presented in histogram, Q-Q plot and box plot diagrams in **Appendix 3:**. Based on observations, 30 outliers were identified and subsequently removed to improve the distribution of data.

In descriptive analysis, the distribution of the total sample of 523 is divided into 3 generations. The total sample consists of 45% of male and 55% of female respondents; 62% working in privately-held companies. Please refer to **Appendix 4:** for detailed demographics data.Multiple linear regression (MLR) analysis objectively assesses the degree of the relationship between the dependent variable and independent variables(Sekaran & Bougie, 2010). MLR was used to investigate the relationship between the dependent variable (employee engagement level) and the independent variables (workplace factors).The overall model fit was R^2 = 0.330, suggesting that 33.7% of the predictors can be explained. The adjusted R^2 of 0.330 indicates that all 5 dependent variables explained the change in employee engagement by 33.7%, the remaining % can be explained by other factors not included in this study.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.580[a]	.336	.330	.60188	2.035

a. Predictors: (Constant), Intrinsic Rewards, Extrinsic Rewards, Social Rewards, Altruistic Rewards, Leisure Rewards.
b. Dependent Variable: Employee Engagement

TABLE 6: Linear Regression.

The Table 7 below reflects the relationship found for each dimension. When number of drivers of engagement (i.e. rewards) was predicted, it was found that:

  i. Intrinsic rewards (Beta = 0.363, P value <0.05), Extrinsic rewards (Beta = 0.147, P value < 0.05) and Altruistic rewards (Beta = 0.170, P value <0.05) were the significant predictors. Hence **Hypothesis 1, 2 & 4 were accepted**.
  ii.
  iii. Leisure rewards (Beta = -0.180, P value > 0.05) and Social rewards (Beta = 0.11, P value >0.05) were not significant predictors. Hence **Hypothesis 3 & 5 were rejected**.

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.834	.195		4.270	.000		
Intrinsic Rewards	.418	.057	.363	7.306	.000	.552	1.812
Extrinsic Rewards	.154	.049	.147	3.153	.002	.627	1.596
Social	.013	.047	.011	.27	.7	.775	1.29

Rewards				1	87		0
Leisure Rewards	-.015	.033	-.018	-.457	.648	.905	1.105
Altruistic Rewards	.169	.048	.170	3.531	.000	.587	1.703

a. Dependent Variable: Employee Engagement

TABLE 7: Relationship Between Engagement & Constructs.

One way ANOVA test was employed to determine if there were any significant differences in level of engagement among the three generations. The result shows marginal differences existed among the three generations (F = 3.361, p = 0.019); therefore, **H6 was accepted**.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.371	3	1.790	3.361	.019
Within Groups	260.486	489	.533		
Total	265.858	492			

TABLE 8: Anova.

4. RESULTS

It is concluded that intrinsic rewards, extrinsic rewards and altruistic rewards conforms to literature findings that they affect employee engagements. In short, as far as these factors are considered, Malaysians seek similar rewards compared to other cultures. However, as opposed to the general stereotypes that are projected on Generation Y, the results of this research indicate that this generation values intrinsic value (i.e. job fulfillment) more than extrinsic value (i.e. monetary benefits). In fact, intrinsic rewards ranked at the top of all work values for all generations (Holt, 2018). Much research shows that compensation is a hygiene factor, not an "engagement" factor. This can be explained via motivation theory in which people are driven by mastery, autonomy and purpose and making work meaningful is of utmost importance.

Differing from literature, Malaysians look at career advancement and promotion as intrinsic value rather than extrinsic value, which is not tied to change in title or additional reward. This can be supported by research in Indonesian startup companies which outlines intrinsic rewards are in the form of fair promotion opportunities, creation of a good work environment, and good communication from superiors (Esthi & Ekhsan, 2020). The reasons for the respondents' interpretation may be two-fold; new skills and knowledge acquired from greater responsibilities offer experiential career experience, and Gen-Y essentially are easily bored (Martin, 2005). Career progression in fact, is viewed as an advancement of one's career which offers internal mobility and taking on new assignments in one chosen area. This is line with the Aon Hewitt report(2012) which states career opportunities is on the top list for employees than compensation benefits or money, and the younger generation is interested in different experiences and wants interesting work that's not repetitive.

In terms of social rewards, with a p-value that is significantly higher than 0.005, our result shows that social rewards do not contribute significantly to engagement and hence, hypothesis H3 is rejected. Our hypothesis was based on the theory that employees given the opportunity to socialize, within or out of the office environment, would give a positive engagement experience. However, the outcome did not support this hypothesis. One theory that supports this outcome is

the possibility that there is a decreasing need for workplace social rewards as Gen-Y moves their social interaction out from the workplace hence valued workplace social interaction less than the predecessors (Twenge, Campbell, Hoffman, & Lance, 2010). With the proliferation of social media and availability of non-stop connections with their own circles of friends, it can be argued that Gen-Y social needs are being met without having to be involved in more social interactions at the workplace. This differs from older generation cohorts that rely much more on workplace relationships for their social needs.

Another theory is based on the person-environment (PE) fit theory which states that when the environment 'fits' the person's values, personality and attributes, there are positive outcomes from that relationship (Kristof-Brown, Zimmerman, & Johnson, 2005). A study based on this theory showed that in their everyday environment, the subjects chose to spend time in certain situations and to avoid others and that these patterns were predictable from personality trait scores. Given a choice, the subjects would choose to avoid situations where they do not 'fit' or feel comfortable (Emmons, Diener, & Larsen, 1986).Using this theory, social situations and interactions provide a good fit for extraverts but will not be a good fit for introverts. Accordingly, introverts will be less likely to choose social situations and less likely to experience pleasant affect in social situations. In summary, extraverts are more sensitive to social 'rewards' but not introverts (Kai et.al,2020; McCrae & Costa, 1987).

A study of the Five Factor of Personality across 36 countries (including Malaysia), which conclusively found that Asians are more introverted than developed countries in North America and Europe (Allik & McCrae, 2004) and a more localised cross-cultural study of extraversion conducted by Lucas et al.(2000) produced similar results. Therefore, Malaysians who are generally not extraverted, may avoid situations which do not 'fit' with their personalities, and a workplace that provides opportunity to socialize will not bring the 'rewards' expected from the social constructs.

In leisure rewards, with a p-value that is significantly higher than 0.005, our research shows that leisure rewards do not contribute significantly to engagement and hence, hypothesis H5 is rejected. This goes against the established notion that work life balance is a highly desired reward in the workplace among the younger generations, thus requiring further exploration on the non-congruence with established studies.

Research by Randstad (2017) found that millennials in Malaysia prefers a more traditional workplace; as much as 45% preferred to stick to standard working hours. To further support this, Hays found that only 40% of Malaysian employees would stay on their job because of work-life balance (The Star Online, 2017). It also appears that this trend was unexpected (Randstad, 2017), putting Malaysians in contrast with millennials worldwide. It is speculated that this may be caused by the general perception of Malaysia's weak economic outlook, putting priorities on job security rather than benefits.

Besides industry findings, academics also found that national culture moderates the relationships between work-life balance and individual outcomes (Haar, Russo, Suñe, & Ollier-Malaterre, 2014). Including cultural dimensions in work-life balance (i.e. Leisure) research is necessary to obtain accurate results. Furthermore, it is found that in Asian cultures, work life balance is perceived as more important to women than for men, while in Anglo-centric culture it is equally important for workers with family responsibilities, regardless of gender (Chandra, 2012). The differences in cultural norms could explain the differing results of our research in contrast with established academic findings.

It can be concluded that while work-life balances are highly sought after in more developed cultures, Malaysians actually have a different priority in regards to leisure rewards; it is only considered good to have, and hence does not affect engagement.

The differences in engagement levels between the generational cohorts could also be attributed to many factors. Such differences can arise from the different generational experiences that influenced on human behavior (Glass, 2007). Personality factors and temperament might also possibly contribute to the observed results (Langelaan, Bakker, van Doornen, & Schaufeli, 2006).Based on our results, younger Gen-Y cohort (17-25 age groups) exhibited no significant difference in engagement level when compared to Generation X; but there are significant differences when compared with Baby Boomers.The results of this study indicated a significant difference between Baby Boomer generation and the other two cohorts. The Baby Boomer generation are the most engaged among the 3 generations, supporting the findings by Gallup (2013) and Hoole & Bonnema (2015).

Older Gen-Y members are relatively new to the workforce and therefore they need to affiliate themselves to become part of the organization(Wong, Gardiner, Lang, & Coulon, 2008); in addition, older Gen-Y have limited opportunity for training and career recognition(Fenzel, 2013) as compared to Gen-X who have worked relatively longer. As such, this might have led to the differences in employee engagement levels.

Our findings show that four of our hypotheses have been accepted while two have been rejected.

Hypothesis	Description	Result
H1	Intrinsic rewards have a positive impact on employee engagement.	Accepted
H2	Extrinsic rewards have a positive impact on employee engagement.	Accepted
H3	Social rewards have a positive impact on employee engagement.	Rejected
H4	Altruistic rewards have a positive impact on employee engagement.	Accepted
H5	Leisure rewards have a positive impact on employee engagement.	Rejected
H6	There are differences between the generational cohorts in terms of employee engagement.	Accepted

TABLE 9: Summary of Hypothesis Acceptance.

5. CONCLUSION AND IMPLICATIONS

There are four accepted hypotheses, three of which are in-line with the construct's hypotheses, namely Intrinsic, Extrinsic and Altruistic Rewards positively impact engagement among Gen-Y in Malaysia. The fourth hypothesis that there are generational differences in engagement levels is also accepted.

On the construct of Intrinsic, the recommendations to human resource practitioners and people managers would be to rethink how job design is done. Each function should be made more challenging and flexible; removing the mundane and menial as much as possible. Manual and repetitive tasks should be eliminated altogether or fully automated. If any responsibility can be made into a more entrepreneur-like nature, that would be highly desirable (Martin, 2005). Additionally, programs for identified talent pool should involve a structured job-rotation that allows learning of new skills and exposure. This is essential to keep the engagement high as organisations may not be able to promote employees continuously.

Over at the extrinsic area, it is essential that compensations match the markets' rates to retain Gen-Y employees. However, beyond having the right pay, to improve engagement it is recommended that a more modernized benefits scheme be introduced. For instance, a type of 'flexible benefits' allows the organisations to keep the cost almost at parity while having the flexibility to cater to the needs of their Gen-Y employees better. Gen-Y, from a health perspective

are statistically less in need of medical attention and have fewer or even no dependents, may opt to 'exchange' their medical insurance premiums for more time-off to increase their paid leaves.

In the area of Altruistic, it is not enough to have traditional corporate social responsibility ("CSR") programs such as visitations to old folks' homes or orphanages. These are seen as transactional and do not have lasting impact on the recipients of the programs. It is suggested that sustainable social entrepreneur-type of CSR that brings lasting and scalable projects has the potential to bring much more engagement to both the employees and more benefits to the community they serve(Visser, 2013).In the recent years, businesses have been integrating environmental, social and governance (ESG) into their workplace, providing the employees a clear connection to something essential – a purpose larger than an individual role. Helping the community, in turn helps building employee morale and boost engagement level (Henisz et al., 2019).

Although this study offers several useful insights for readers, some limitations should be noted. On the fourth accepted hypothesis, where the older generations are found to be more engaged than Gen-Y, the differences were not very pronounced. There are limited data points to conclusively identify the root cause of these differences. More research is recommended to study in greater depth, especially in the intrinsic, extrinsic and altruistic constructs, among the generation cohorts. This is because these three constructs were found to have a positive impact on employee engagement comparatively with social and leisure constructs.The second limitation is the disproportionate age group sample size and work sector, which may have cause inconsistency due to individuals'level of maturation and experience, rather than generational difference. Furthermore, another study (Gan & Yusof, 2018) showed that findings on Gen Y preference between intrinsic rewards and extrinsic rewards are not consistent throughout the years. To overcome this limitation, it is suggested to conduct a longitudinal study in which individuals of same age group are compared over different time period in a different sector, with a proportionate sample size.Thirdly, researchers began to perceive the need to determine the actual generation cohorts in their respective countries, given the practicabilityas the existing generational framework was popularized in United States. This is because cohort's values and attitudes are shaped and determined by their attachment to the external events which are different across countries. As such, future studies may delve into the values and lifestyles of each generation cohort, and the differences across the cohorts in greater detail to look into the implication of generations on the subjects under investigation (Ting et al., 2018).

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Henry Drieberg, Jarreth Yeo, Lee Kar Fai, & Shalini Selvam

Appendix 1: QUESTIONNAIRE

PART A: Demographics

1. Please indicate your Gender
   - o   Male
   - o   Female

2. Please indicate your Age Group

   - o   17 – 25
   - o   26 – 37
   - o   38 – 57
   - o   58 and above

3. Please indicate the Race you affiliate with

   - o   Malay
   - o   Chinese
   - o   Indian
   - o   Others

4. Please indicate the total years of working experience you have

   - o   1 – 5
   - o   6 – 10
   - o   11 – 15
   - o   16 – 20
   - o   21 – 25
   - o   26 – 30
   - o   31 and above

5. Please indicate your employment sector

   - o   Privately held company
   - o   Government-linked company
   - o   Public-listed company
   - o   Non-governmental organization

6. Please indicate the position you are holding in your current employment

   - o   Non-Executive
   - o   Junior/Senior Executive
   - o   Manager (Junior/Assistant/Senior)
   - o   General Manager / Director
   - o   Others (Pls specify) _____

7. Which of the following best describes your monthly income?

   - o   Below RM5,000
   - o   RM5,000 – RM9,999
   - o   RM10,000 – RM19,999
   - o   RM20,000 – RM49,999

- ○ RM50,000 or above
- ○ Prefer not to answer

PART B: Engagement Level

The following statements are about how you feel at work. Please read each statement carefully and
select the choice most indicative of how you feel. On a five-point scale, where "5" is strongly agree and
"1" is strongly disagree, please indicate your level of agreement with each of the following statements:

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
This job is all consuming; I am totally into it	▣	▣	▣	▣	▣
I am highly engaged in this job	▣	▣	▣	▣	▣
Being a member of this organization is very captivating	▣	▣	▣	▣	▣
Being a member of this organization make me come "alive"	▣	▣	▣	▣	▣
Being a member of this organization is exhilarating for me	▣	▣	▣	▣	▣
I am highly engaged in this organization	▣	▣	▣	▣	▣

PART C: Workplace Factors

The following statements are about your job or workplace. Please read each statement carefully and
select the choice most indicative of your experience. On a five-point scale, where "5" is strongly agree and
"1" is strongly disagree, please indicate your level of agreement with each of the following statements:

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
My job allows me to have long vacation	▣	▣	▣	▣	▣
I have an interesting job	▣	▣	▣	▣	▣
I have a high status and prestige job	▣	▣	▣	▣	▣
My job gives me chances to make friends	▣	▣	▣	▣	▣
My job leaves a lot of time for other things in my life	▣	▣	▣	▣	▣

Most people look up to and respect my job	☐	☐	☐	☐	☐

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
I have a job that is worthwhile to society	☐	☐	☐	☐	☐
My job permits contact with a lot of people	☐	☐	☐	☐	☐
I have an easy pace job that allows me to work slowly	☐	☐	☐	☐	☐
My job pays me a good deal of money	☐	☐	☐	☐	☐
My job allows me to expand my social network	☐	☐	☐	☐	☐
My job allows me to see the results of my work	☐	☐	☐	☐	◉
My job gives me good chances for advancement and promotion	☐	☐	☐	☐	☐
My job allows me to perform meaningful contributions to society	☐	☐	☐	☐	☐
My job allows me to have fun after working hours	☐	☐	☐	☐	☐
My job allows me to utilize my skills and abilities	☐	☐	☐	☐	☐
My job provides 'fun at work'	☐	☐	☐	☐	☐
My job allows me to be who I am	☐	☐	☐	☐	☐
My job allows me to have a positive impact on my community	☐	☐	☐	☐	☐
My job allows me to collaborate with other Colleagues	☐	☐	☐	☐	☐
My job allows me to be creative	☐	☐	☐	☐	☐

Appendix 2: SUMMARY OF PILOT TEST

A checklist item was used to get respondents to fill it up during the pilot test which contains questions such as if simple words are used, if there is any ambiguity in the questions, etc.

Summary of key comments obtained from the first pilot test are as below:

No	Comment	Action taken
1	Simple and straightforward questionnaire	N/A
2	For part B, segmenting the questions by rewards may introduce bias as the reader knows the underlying constructs for the questions.	The questions in part B were merged as one and shuffled.
3	For part C, "I have no intention to search for a new job in the next 12 months" and "If I have my own way, I will still be working for this organization one year from now" may have similar meaning.	The whole questions for part B were reconstructed. Hence, this comment was disregarded.

Appendix 3: NORMALITY TEST

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Intrinsic Rewards	.142	523	.000	.953	523	.000
Extrinsic Rewards	.116	523	.000	.974	523	.000
Social Rewards	.163	523	.000	.948	523	.000
Altruistic Rewards	.125	523	.000	.966	523	.000
Leisure Rewards	.084	523	.000	.980	523	.000
Employee Engagement	.112	523	.000	.963	523	.000

a. Lilliefors Significance Correction

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Appendix 3.1: <u>HISTOGRAM, NORMAL Q-Q PLOT & BOX PLOT</u> <u>(INTRINSIC REWARDS)</u>

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Normal Q-Q Plot of Intrinsic Rewards

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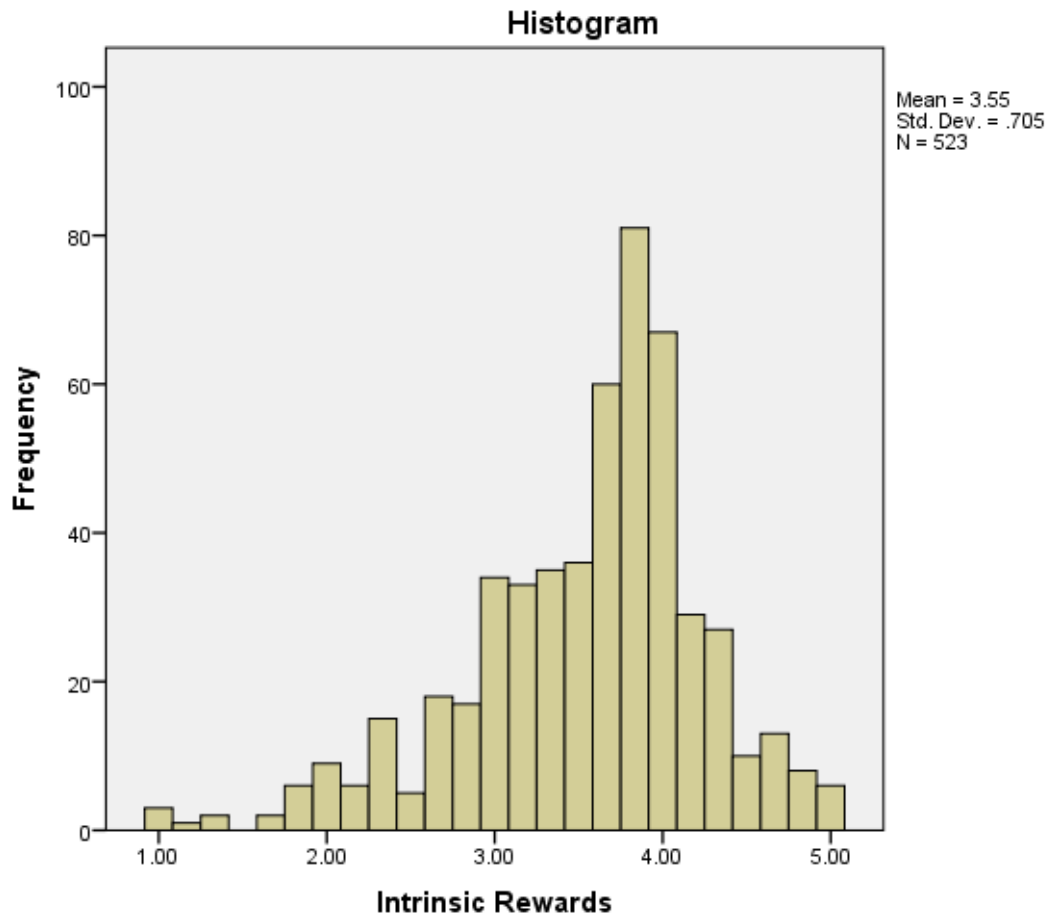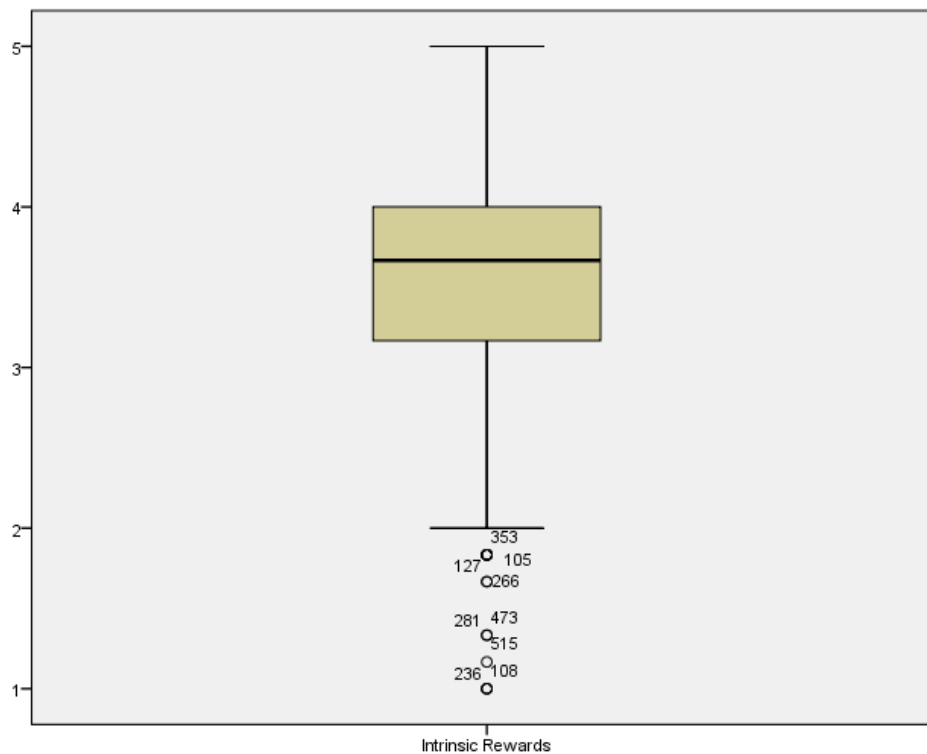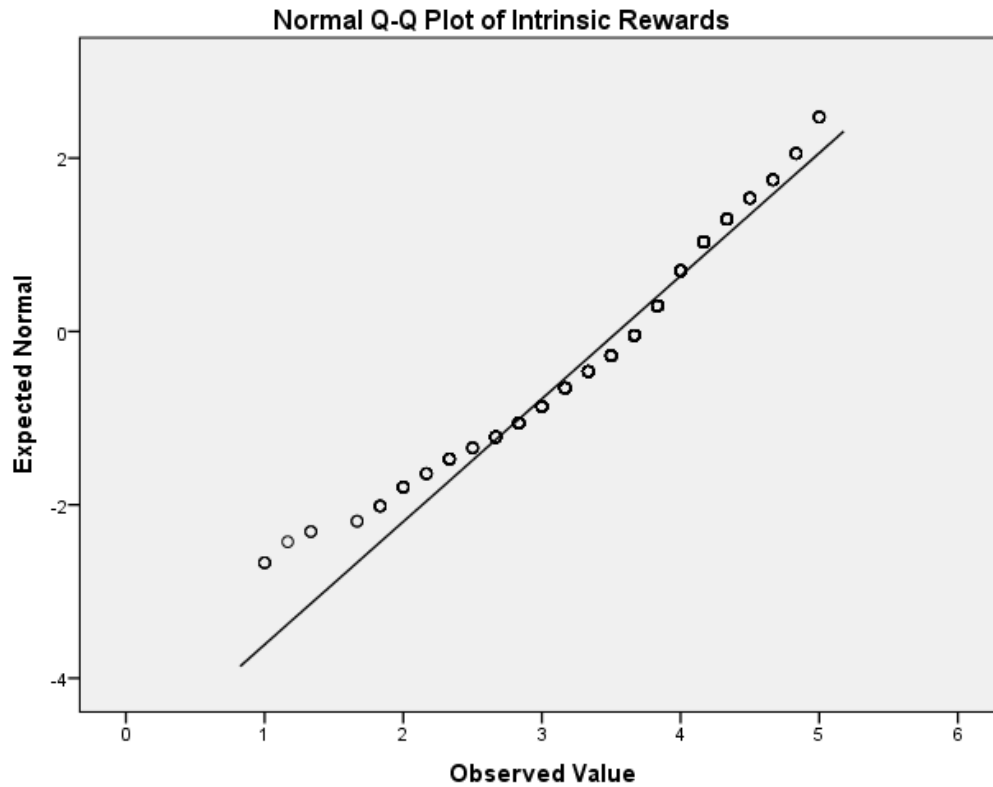
Appendix 3.2: HISTOGRAM, NORMAL Q-Q PLOT & BOX PLOT (EXTRINSIC REWARDS)

Histogram

Mean = 3.19
Std. Dev. = .741
N = 523

Normal Q-Q Plot of Extrinsic Rewards

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Extrinsic Rewards
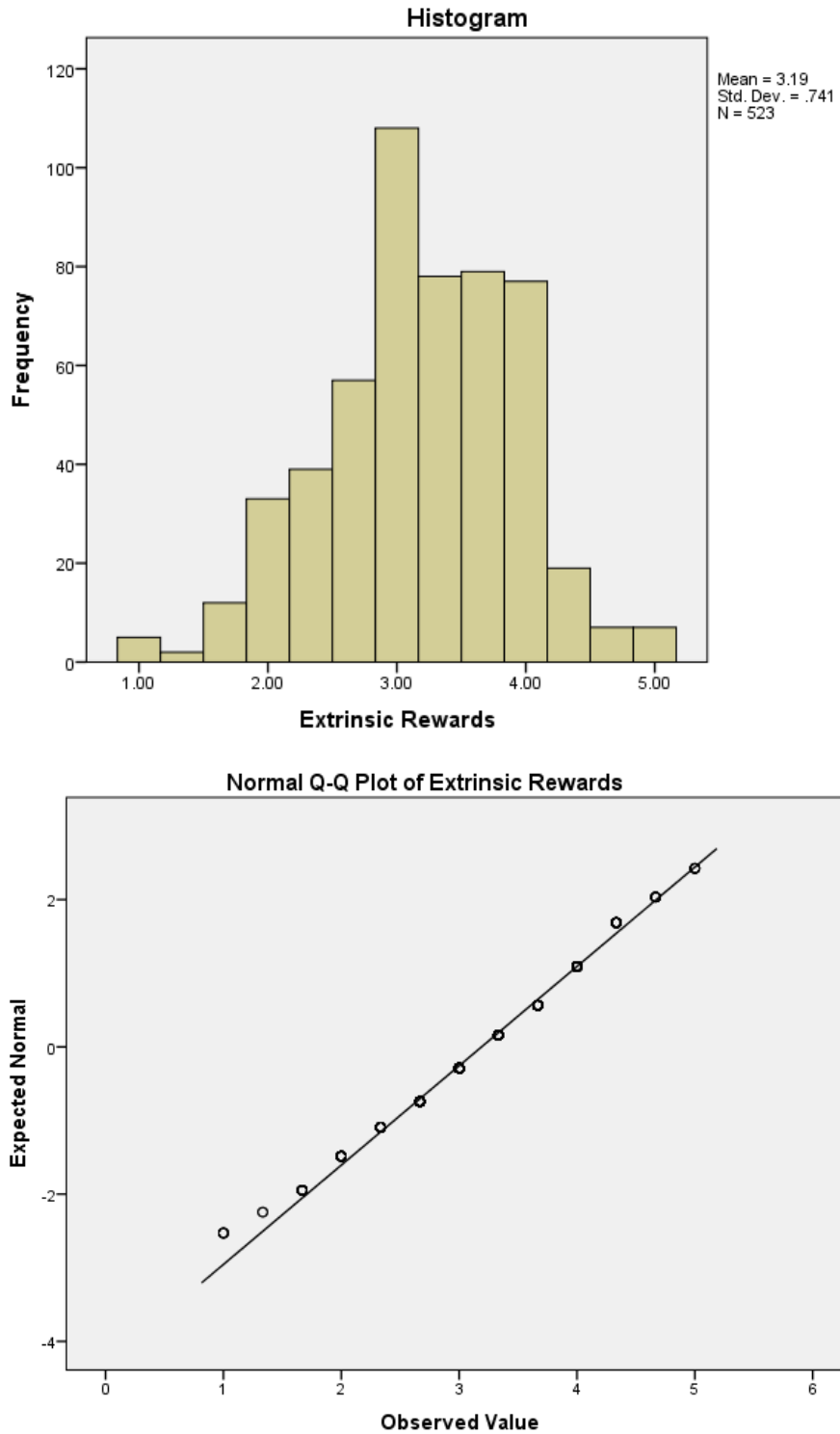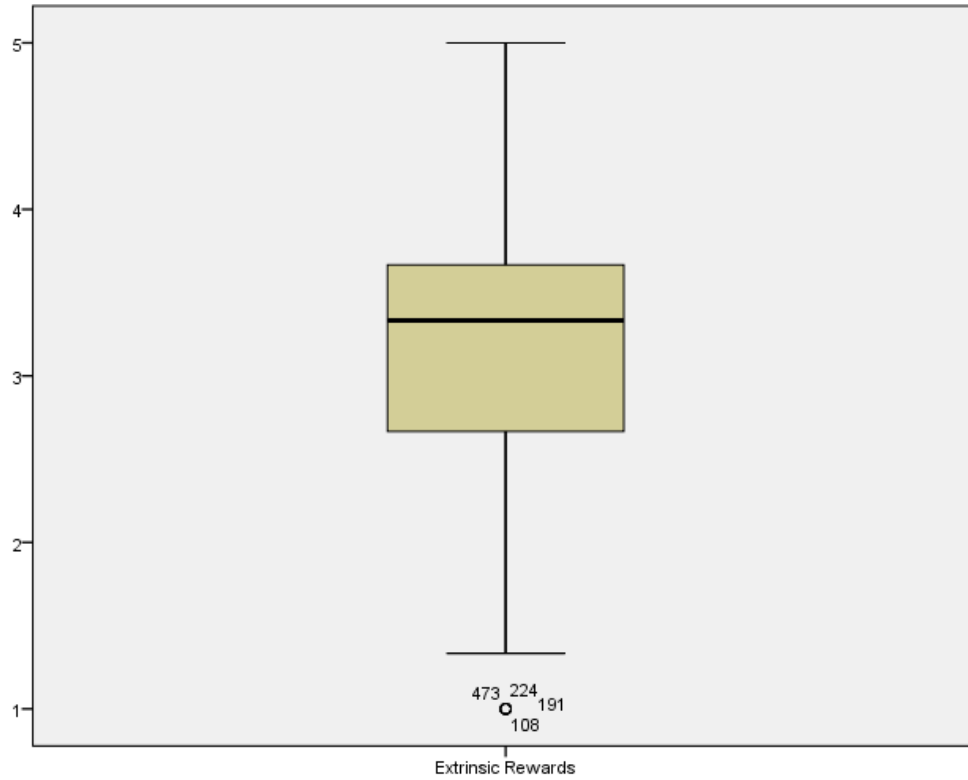
Appendix 3.3: HISTOGRAM, NORMAL Q-Q PLOT & BOX PLOT (SOCIAL REWARDS)

Histogram

Mean = 3.72
Std. Dev. = .75
N = 523

Normal Q-Q Plot of Social Rewards

Social Rewards

Henry Drieberg, Jarreth Yeo, Lee Kar Fai, & Shalini Selvam
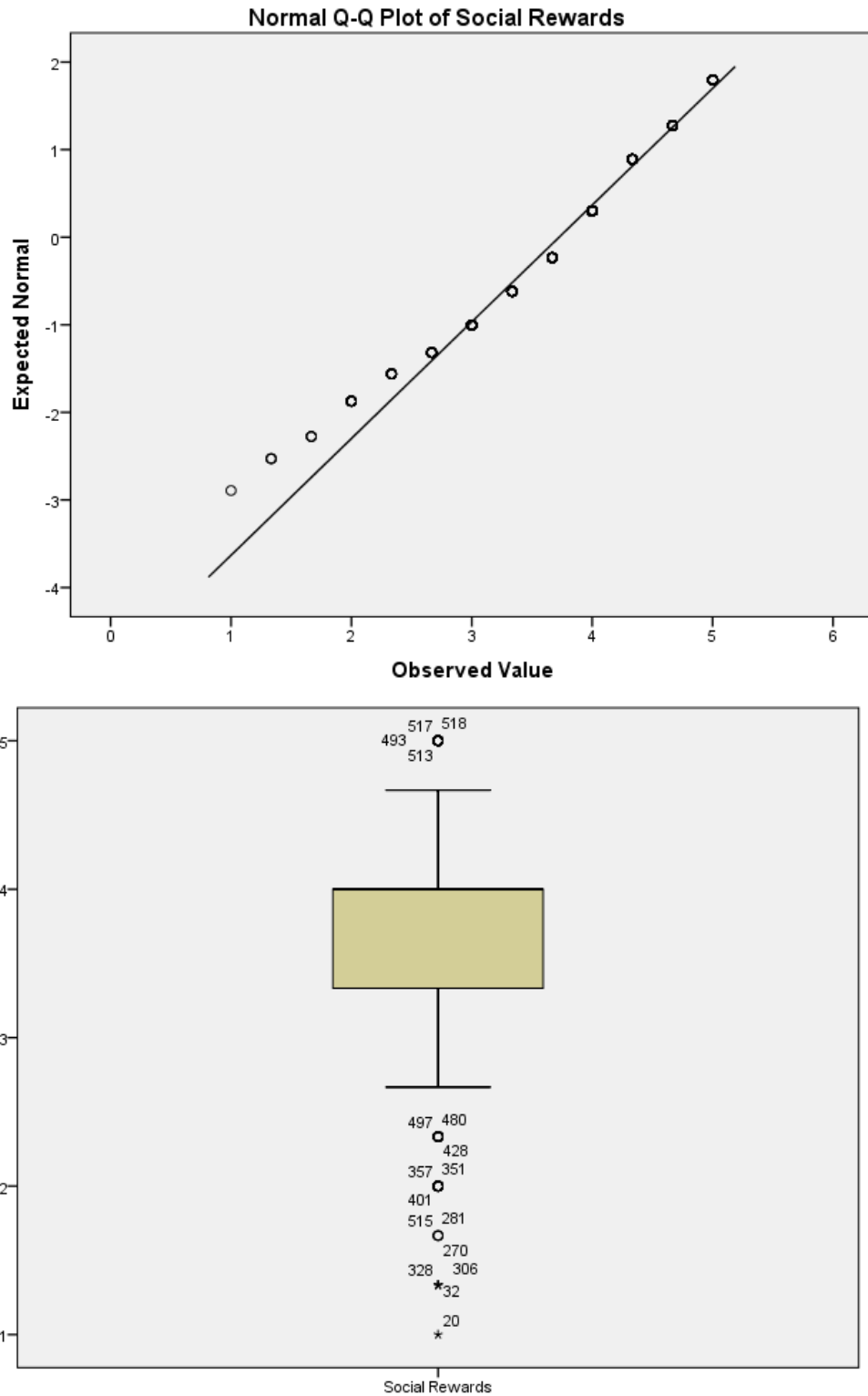
Appendix 3.4: HISTOGRAM, NORMAL Q-Q PLOT & BOX PLOT (ALTRUISTIC REWARDS)

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Normal Q-Q Plot of Altruistic Rewards

Henry Drieberg, Jarreth Yeo, Lee Kar Fai, & Shalini Selvam
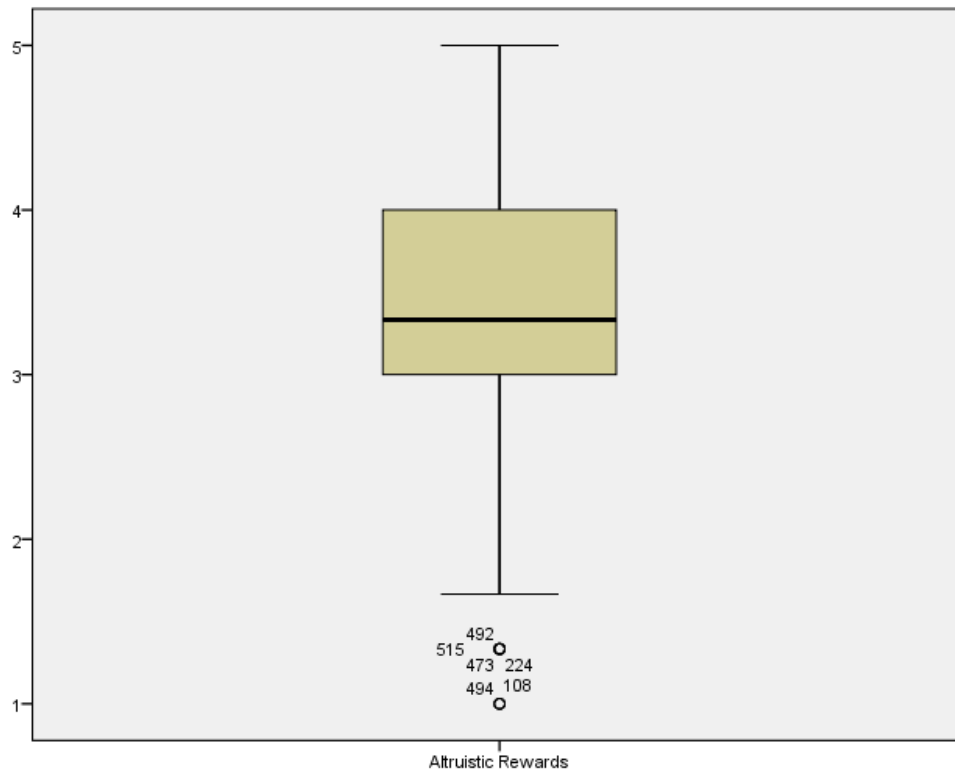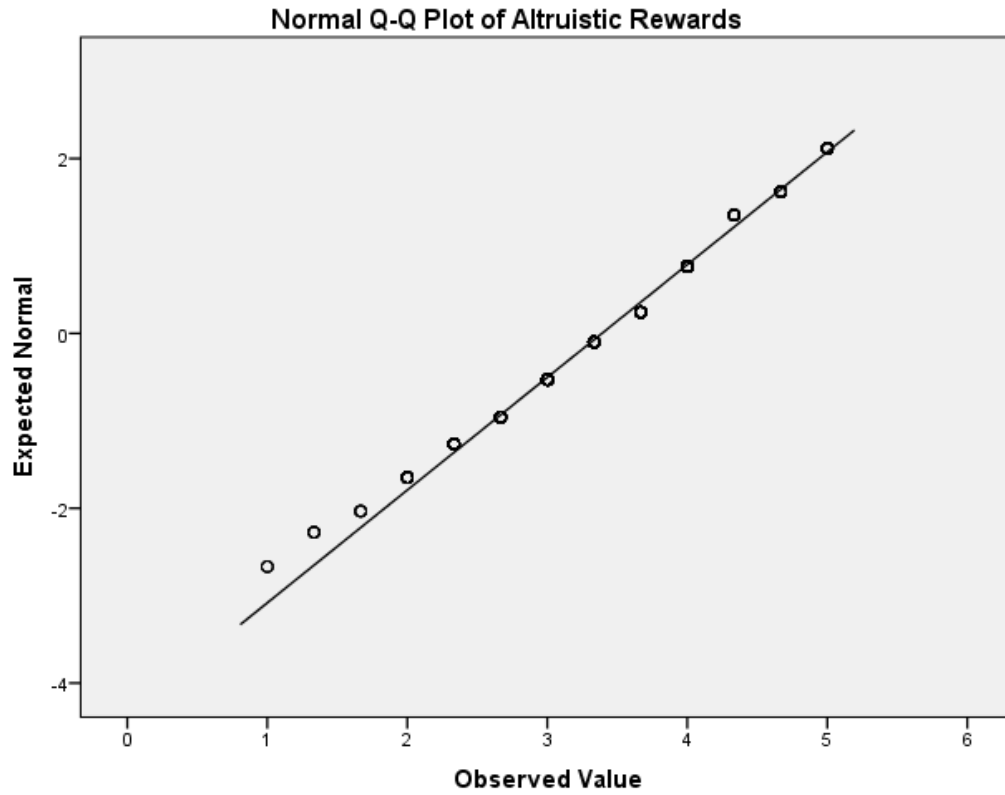
Appendix 3.5: HISTOGRAM, NORMAL Q-Q PLOT & BOX PLOT (LEISURE REWARDS)

Histogram

Mean = 2.84
Std. Dev. = .874
N = 523
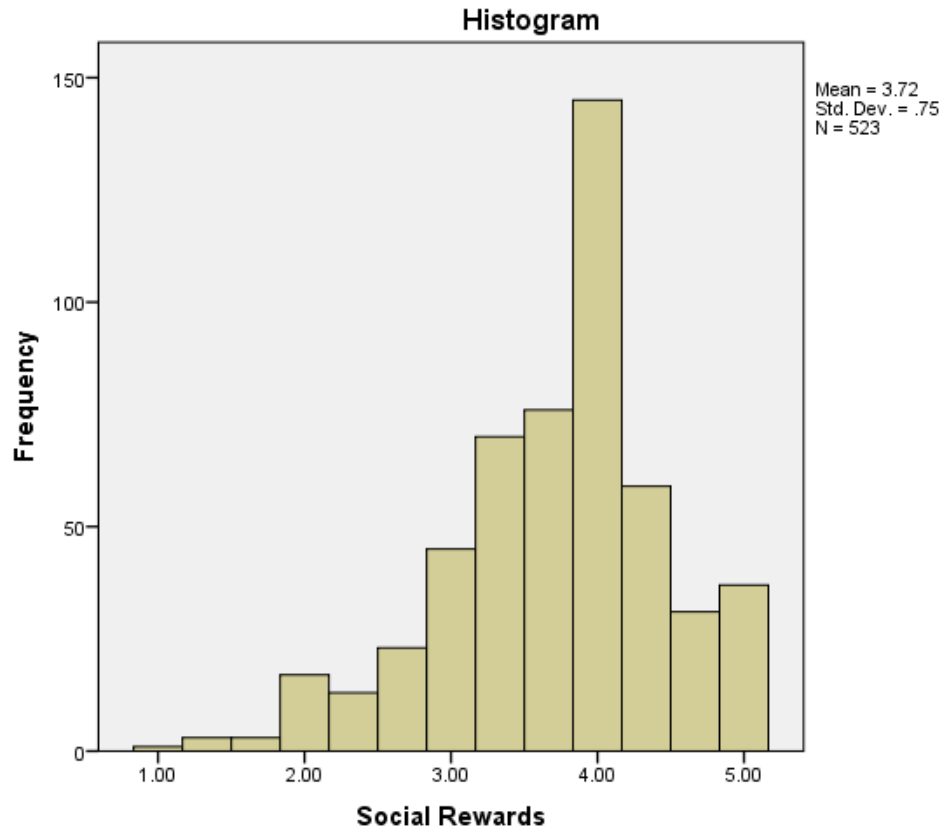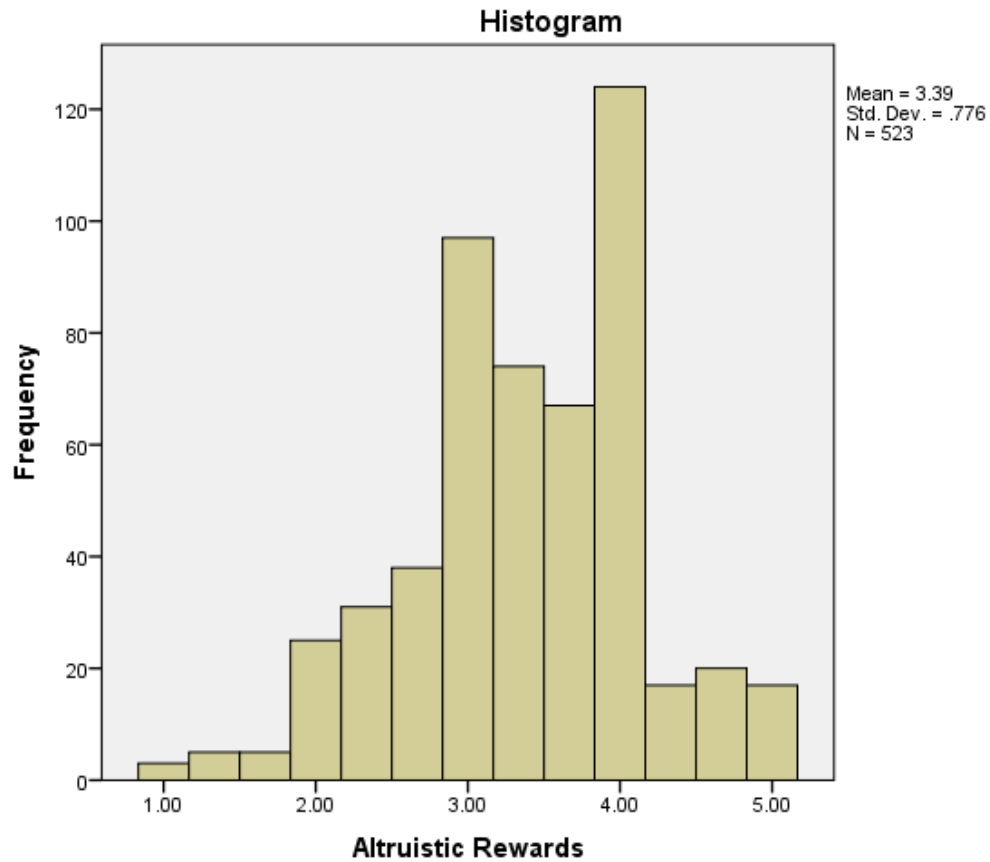
Normal Q-Q Plot of Leisure Rewards
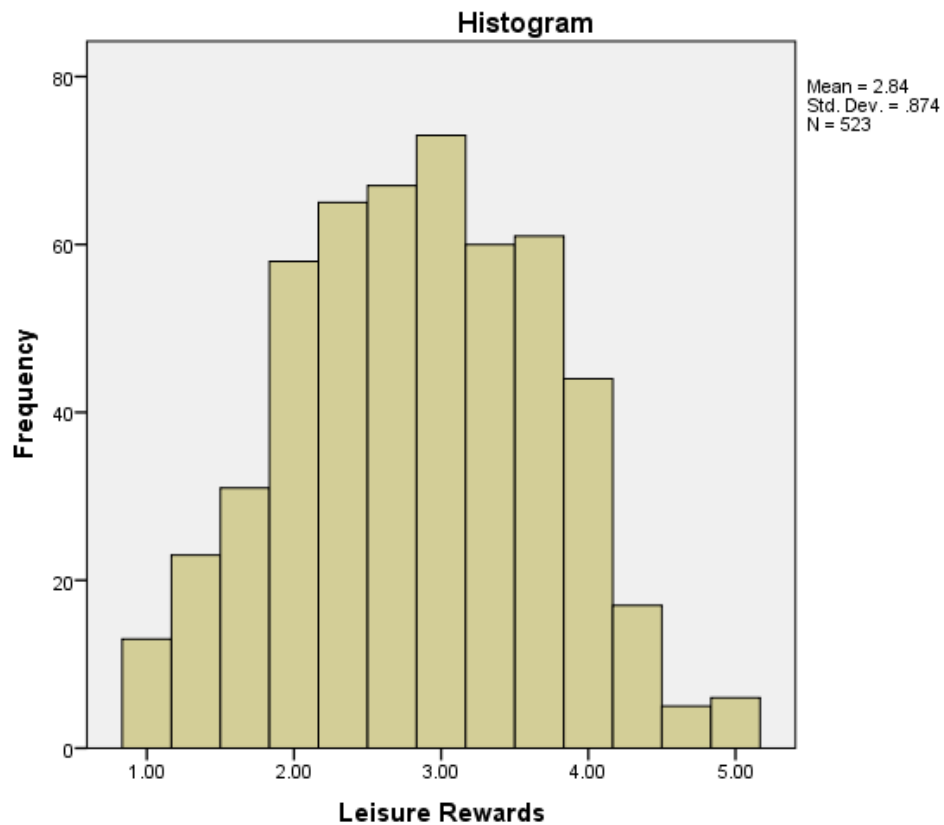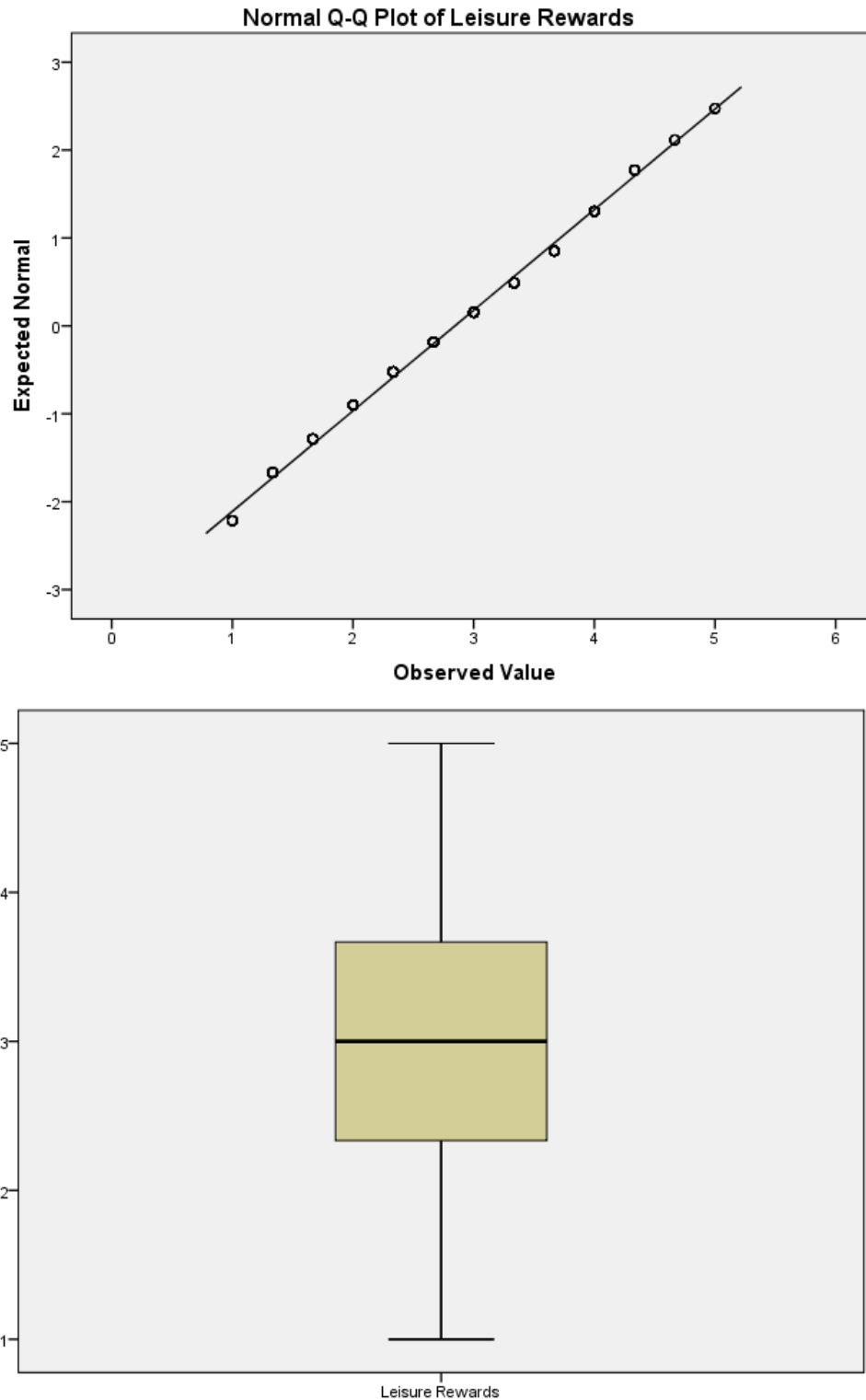
Appendix 3.6: HISTOGRAM, NORMAL Q-Q PLOT & BOX PLOT (EMPLOYEE ENGAGEMENT)

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Normal Q-Q Plot of Employee Engagement

Employee Engagement
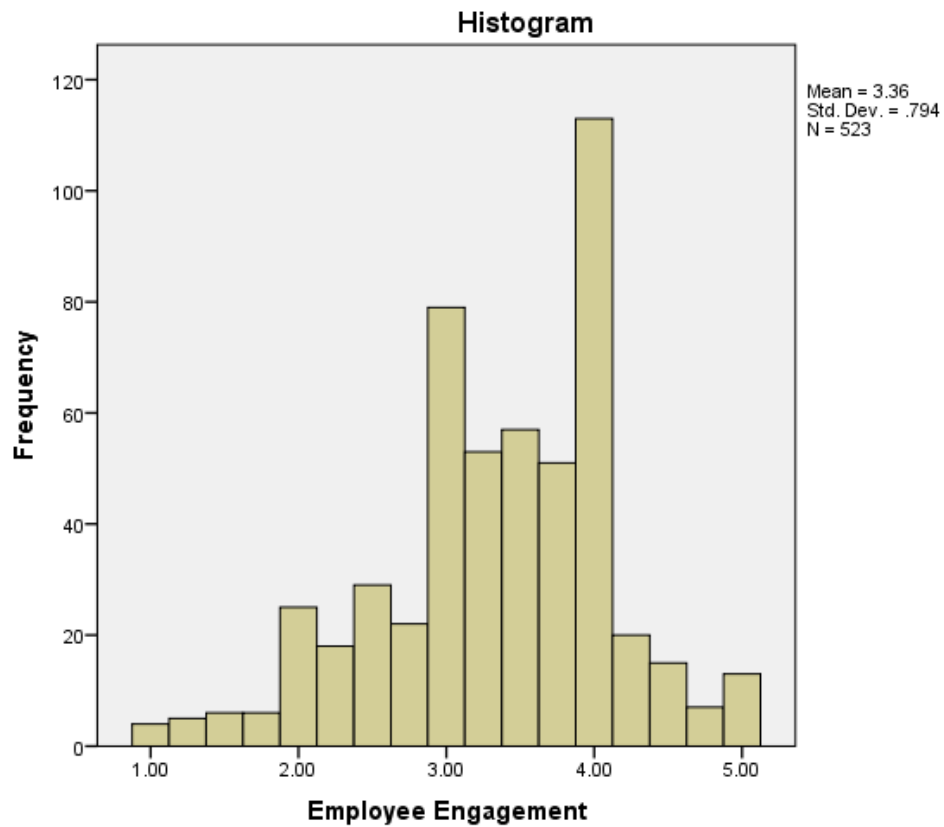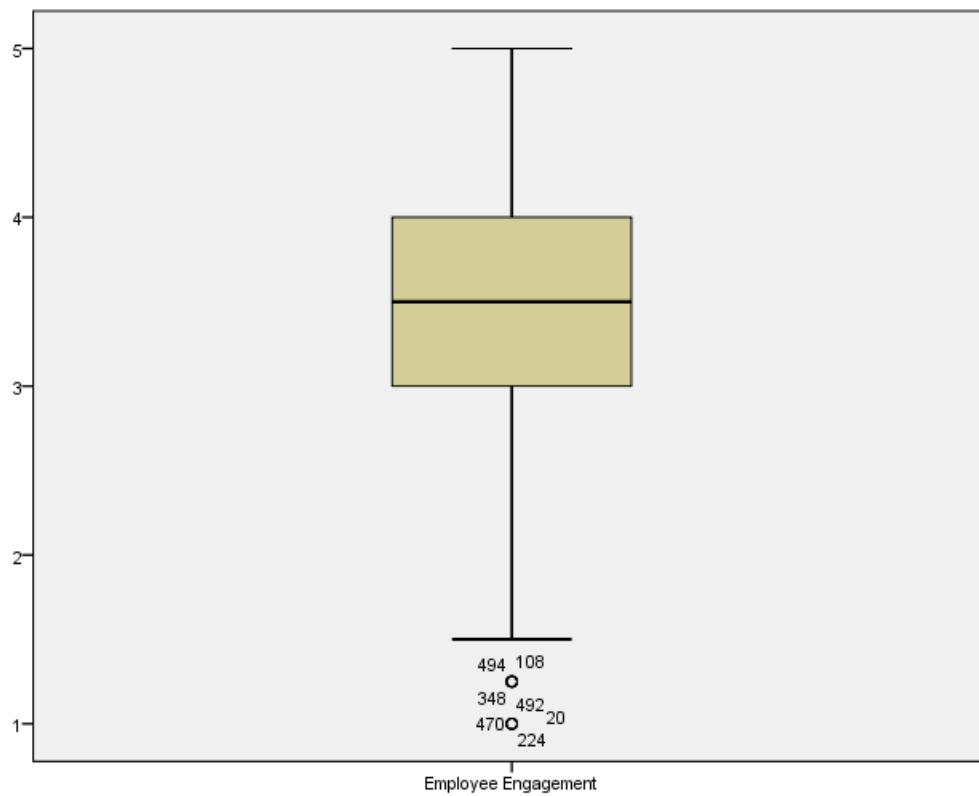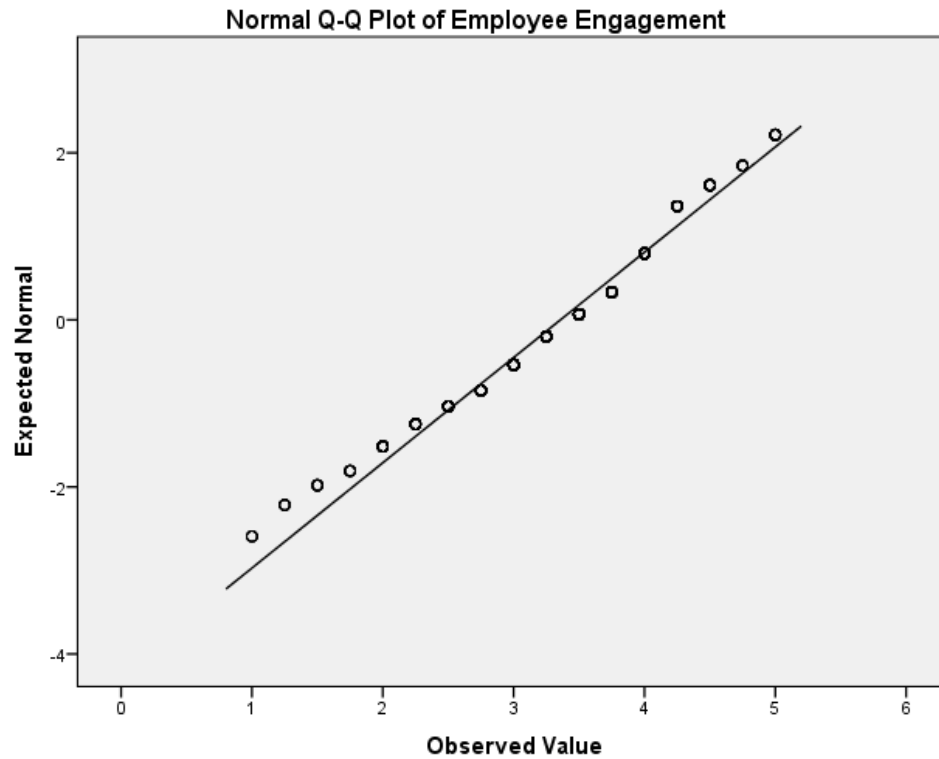
Appendix 4: DESCRIPTIVE ANALYSIS ON RESPONDENT PROFILE

Variables	Categories	Frequency	Percentage
Gender	Male	236	45%
	Female	287	55%
Age group	17-25	51	10%
	26-37	335	64%
	38-57	130	25%
	58 and above	7	1%
Race	Malay	56	11%
	Chinese	368	70%
	Indian	84	16%
	Others	15	3%
Working experience	1-5 years	158	30%
	6-10 years	159	30%
	11-15 years	86	16%
	16-20 years	65	12%
	21-25 years	28	5%
	26-30 years	12	2%
	31 and above	15	3%
Employment sector	Privately held company	322	62%
	Government linked company	39	8%
	Public listed company	149	28%
	Non-governmental organization	13	2%
Position	Non-executive	40	8%
	Junior/Senior executive	428	41%
	Manager	693	44%
	(Junior/Assistant/Senior)	152	7%
	General Manager/ Director		
Monthly income	Below RM5,000	191	37%
	RM5,000-RM9,999	189	36%
	RM10,000-RM19,999	93	18%
	RM20,000-RM49,999	15	3%
	RM50,000 and above	8	2%
	Prefer not to answer	27	5%

Appendix 5: LINEAR REGRESSION ANALYSIS

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.580[a]	.336	.330	.60188	2.035

a. Predictors: (Constant), Intrinsic Rewards, Extrinsic Rewards, Social Rewards, Altruistic Rewards, Leisure Rewards.
b. Dependent Variable: Employee Engagement

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.436	5	17.887	49.377	.000[b]
	Residual	176.421	487	.362		
	Total	265.858	492			

a. Dependent Variable: Employee Engagement
b. Predictors: (Constant), Intrinsic Rewards, Extrinsic Rewards, Social Rewards, Altruistic Rewards, Leisure Rewards.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	.834	.195		4.270	.000		
	Intrinsic Rewards	.418	.057	.363	7.306	.000	.552	1.812
	Extrinsic Rewards	.154	.049	.147	3.153	.002	.627	1.596
	Social Rewards	.013	.047	.011	.271	.787	.775	1.290
	Leisure Rewards	-.015	.033	-.018	-.457	.648	.905	1.105
	Altruistic Rewards	.169	.048	.170	3.531	.000	.587	1.703

a. Dependent Variable: Employee Engagement

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Appendix 6: ONE-WAY ANOVA

Descriptives

Employee Engagement

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
17-25	47	3.3404	.86355	.12596	3.0869	3.5940	1.25	5.00
26-37	315	3.3714	.68548	.03862	3.2954	3.4474	1.50	5.00
38-57	124	3.5363	.79486	.07138	3.3950	3.6776	1.50	5.00
58 and above	7	4.0357	.39340	.14869	3.6719	4.3995	3.50	4.50
Total	493*	3.4194	.73509	.03311	3.3543	3.4844	1.25	5.00

*Note: N=493 due to removal of 30 outliers (from N=523) during Normality Test.

Test of Homogeneity of Variances

Employee Engagement

Levene Statistic	df1	df2	Sig.
2.346	3	489	.072

ANOVA

Employee Engagement

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.371	3	1.790	3.361	.019
Within Groups	260.486	489	.533		
Total	265.858	492			

Multiple Comparisons

Dependent Variable: Employee Engagement
LSD

(I) A2	(J) A2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
17-25	26-37	-.03100	.11413	.786	-.2552	.1932
	38-57	-.19586	.12502	.118	-.4415	.0498
	58 and above	-.69529[*]	.29569	.019	-1.2763	-.1143
26-37	17-25	.03100	.11413	.786	-.1932	.2552
	38-57	-.16486[*]	.07738	.034	-.3169	-.0128
	58 and above	-.66429[*]	.27891	.018	-1.2123	-.1163
38-57	17-25	.19586	.12502	.118	-.0498	.4415
	26-37	.16486[*]	.07738	.034	.0128	.3169
	58 and above	-.49942	.28354	.079	-1.0565	.0577
58 and above	17-25	.69529[*]	.29569	.019	.1143	1.2763
	26-37	.66429[*]	.27891	.018	.1163	1.2123
	38-57	.49942	.28354	.079	-.0577	1.0565

*. The mean difference is significant at the 0.05 level.

Work Segmentation, Psychological Detachment, and Burnout: The Moderating Role of Work-Related Communication Technology Use During Leisure Hours

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Abstract

Employees have recently experienced difficulties in maintaining boundaries and detaching from work due to increased availability expectations that accompany communication technology use. However, research has found that switching off from work is imperative for well-being and recovery. Drawing on the Conservation of Resources model and boundary theory, the objectives of this cross-sectional study was to explore the relationships between work-home segmentation preferences and norms, communication technology (CT) use, and psychological detachment. This study also investigated whether low psychological detachment was an indicator of burnout. A total of 224 participants responded to an online questionnaire. Results of initial hierarchical regressions indicated that psychological detachment was positively associated with segmentation preferences and perceived segmentation norms. In addition, bootstrapped mediation analyses indicated that CT use mediated the former relationship. However, low psychological detachment was not a significant predictor of increased burnout. Discussion focuses on the implementation of organisational policies for employees to achieve successful boundary control and improved psychological detachment.

Keywords: Employee Well-being, Psychological Detachment, Work-home Segmentation, Burnout, Communication Technology.

1. INTRODUCTION
The development of communication technologies (CT) such as smartphones and laptops have created countless opportunities for workers, providing them with increased flexibility and autonomy. Work is no longer restricted to fixed hours at a specific location, as CT enables employees to be productive outside the office and during unconventional working hours (Towers, Duxbury, Higgins, & Thomas, 2006). Employees also have more control over how they organize their time and work (Allen & Shockley, 2009; Allvin, Mellner, Movitz, & Aronsson, 2013). As such, they are able to respond to emails and work-related calls during the evenings or the weekend (Kossek & Lautsch, 2012; Major & Germano, 2006). The use of smartphones and personal computers has also facilitated telecommuting. It is now convenient to work and communicate with co-workers or clients irrespective of time and place (Boswell & Olson-Buchanan, 2007; Grant et al., 2013; Middleton, 2007). In other words, such technological developments enable employees to be constantly available. One large advantage of this phenomenon is that organisations are able to react quickly to changing markets and the rapid increase in global competition (Mellner, 2016).

However, with such advancements comes a price. In recent years, there has been an increased expectation for employees to be accessible outside regular working hours (Middleton & Cukier, 2006; Wang, Shu, & Tu, 2008). This "always on" policy often leads to excessive use of

communication technologies, which may cause the blurring of boundaries between work and home domains. Employees may have difficulties with mentally "switching off" from work while they are away from the office (Duxbury & Higgins, 2001). Such poor psychological detachment might have adverse effects on the recovery process and well-being, as employees may find it harder to recharge at the end of the day (Eden, 2001; Geurts & Sonnentag, 2006). The lack of separation between the work and home lives may also lead employees to consciously attempt to segment the two domains in order to maintain a balance (Towers et al., 2006). As such, the present study takes work-home segmentation preference and perceived segmentation norms into account as potential predictors of psychological detachment.

The lack of recovery due to pressures from work "overflow" outside working hours has also been found to contribute to burnout, which may have negative consequences on employee health and job performance (Hakanen & Schaufeli, 2012). It is therefore imperative that more research is conducted in order to form a holistic understanding of psychological detachment, its antecedents, and its relationship with stress and burnout. This knowledge will facilitate the development of more effective work habits, which may promote a healthier workforce.

Regardless of the growing body of empirical research demonstrating the importance of psychological detachment (Binnewies, Sonnentag, & Mojza, 2009; Sanz-Vergel, Demerouti, Bakker, & Moreno-Jiménez, 2011), there exists a serious gap in existing knowledge on the impact of work-related communication technologies on psychological detachment and how individuals cope with these effects through segmentation or integration strategies. There is also a demand for replication studies to be conducted to determine whether the findings of previous studies can be reproduced (Cesario, 2014).

This study planned to investigate employee well-being in terms of psychological detachment, work-home segmentation and burnout constructs when using communication technology, using quantitative methods.

2. THEORETICAL FRAMEWORK

2.1 Conservation of Resources Theory and Psychological Detachment

The conservation of resources model (COR) is one of the leading models of stress. According to the model, individuals seek to obtain and retain physical and psychological resources such as conditions, personal characteristics, and energies (Hobfoll, 1989). Recovery experiences allow employees to regain resources that have been lost due to work demands and to generate new resources. Recovery is defined as a process in which a person's psycho physiological systems that were in operation are able to return to a baseline level (Sonnentag & Fritz, 2007). This process allows the individual to replenish their mental and physical resources that may be depleted in the workplace (Hobfoll, Johnson, & Jackson, 2003). In other words, it eliminates or alleviates the effects of stressors and restores the individual's functioning to its original levels where strain is reduced (Meijman & Mulder, 1998). Recovery experiences are extremely important for employees as a lack of recovery from work, particularly over time, would result in decreased resources. The individual must expend greater effort and energy to deliver sufficient performance (Clinton, Conway, & Sturges, 2017). The consequences of the lack of resources could have detrimental effects towards the individual's overall job performance and well-being. For instance, it has been found to be related to increased fatigue and poor sleep (Van Hooff, Geurts, Kompier, & Taris, 2006).

Recovery experiences are crucial mechanisms in the recovery process. These include psychological detachment, mastery experiences, relaxation, and control during leisure time (Etzion, Eden, & Lapidot, 1998; Sonnentag & Fritz, 2007). Psychological detachment in particular has been shown to have especially strong associations with well-being (Sonnentag & Fritz, 2007; Sonnentag & Fritz, 2015). Regarded as one of the most important recovery experiences (de

Jonge, Spoor, Dormann, van den Tooren, 2012), it involves being physically away from work, refraining from completing work-related tasks, and psychologically leaving the workplace behind during leisure time (Etzion et al., 1998; Shimazu et al., 2016). According to the COR model, mentally disengaging from work allows active functional systems to recuperate (Sonnentag & Fritz, 2007). As psychological detachment helps individuals to not only restore lost resources, but to gain new ones, it is related to improved employee well-being, life satisfaction, organisational citizenship, intrinsic motivation (Binnewies et al., 2010; Sonnentag & Bayer, 2005; Sonnentag, Binnewies, Mojza, 2008), as well as lower levels of emotional exhaustion (Fritz, Yankelvich, Zarubin, & Barger, 2010).

2.2 Boundary Theory
Psychological detachment has been found to be associated with the boundaries between employees' work and home lives. A boundary exists when the limits or extent between two spaces or areas can be determined. Confusion over boundaries can occur. Some people may enjoy bringing their work home with them while others may dislike it. The setting of such boundaries is determined by various factors, such as the individual, society, culture, family, and so on. The boundary theory claims that employees balance cognitive, spatial, and temporal boundaries between work and family with the use of different boundary management strategies (Ashforth, Kreiner, & Fugate, 2000; Edwards & Rothbard, 2000). Such strategies fall on a continuum from weak boundaries (higher integration) to stronger boundaries (high segmentation) (Ashforth et al., 2000; Duxbury, Higgins, Smart, & Stevenson, 2014). According to Nippert-Eng (1996), a person may choose to only take calls from clients while in the workplace and to participate fully in non-work-related activities during off-job time. This individual chooses to segment between work and home domains. On the other hand, those who respond to emails while at home engage in integrative boundary management behaviours (Nippert-Eng, 1996).

3. LITERATURE REVIEW
3.1 Work-Home Segmentation Preference and Psychological Detachment
Researchers have found that employees who are able to maintain concrete boundaries between different domains experience less work-family conflict in comparison to those who are unable to separate between these boundaries (Ashforth et al., 2000). Integration often leads to cross-role interruptions and has been found to affect the recovery process (Boswell & Olson-Buchanan, 2007; Mellner, 2006). Employees often have a preference towards using either segmentation or integration strategies (Kreiner, 2006). A higher work-home segmentation preference has been found to be positively associated with psychological detachment (Hahn & Dormann, 2013; Park, Fritz, & Jex, 2011). Foucreault, Ollier-Malaterre, and Ménard (2016) also stated that preference for segmentation was related to reduced emotional exhaustion as it led to higher psychological detachment. The reduction in emotional exhaustion was even stronger for employees who perceived that the organisation had a culture of segmentation (Foucreault et al., 2016). Conversely, Hahn and Dormann (2013) examined the role of partners and children on the psychological detachment of employees. They found that the work-home segmentation preferences of employees and their partners were associated with employees' psychological detachment. Boundary violations have also been reported to be associated with greater work-family conflict and lower levels of satisfaction with investment in work (Hunter, Clark, & Carlson, 2019). These findings indicate that employees' preferences do influence the use of boundary management strategies, which in turn affects well-being.

While the association between segmentation and psychological detachment has gained increasing interest from researchers in recent years, there are still few studies that have been conducted to explore this relationship. Therefore, the first research hypothesis for this study is to test the proposition that employees who show a preference towards segmenting between work and home domains also experience higher psychological detachment.

Hypothesis 1: A high work segmentation preference will be positively associated with psychological detachment during leisure hours.

3.2 Perceived Segmentation Norms and Psychological Detachment

Based on the boundary theory and the above studies (Foucreault et al., 2016; Hahn & Dormann, 2013; Park et al., 2011), it can be argued that boundary management behaviours are a matter of individual free choice. However, while the individual is inclined to behave based on their own preferences, they are also exposed to various behaviours, norms, values, and beliefs in their organisation (Thompson, Beauvais, & Lyness, 1999). This organisational culture may in fact favour one particular boundary management approach over another (McDonald, Pini, & Bradley, 2007). The boundary theory states that an employee's boundary creation between work and home is influenced by psychosocial factors in the workplace (Ashforth et al., 2000; Kossek & Lautsch, 2012). As such, it is not uncommon for organisations to encourage employees to adopt, for instance, integrative boundary management strategies although it is against their personal preference (Rothbard & Ollier-Malaterre, 2015).

Employees' perceptions of the segmentation norms within their organisation may also be a predictor of psychological detachment during leisure hours. Studies have found that employees who perceived that others within their organisation separated work and home domains were more likely to do so themselves (Park et al., 2011; Yang, Zhang, Shen, Liu, & Zhang, 2019; Foucreault et al., 2016). Conversely, the perception of an organisational culture of greater integration reduced the effect of segmentation preference. As such, these employees experienced less detachment from work during leisure time. Yang et al. (2019) specifically explored the impact of increased work-related ICT (Information Communication Technology) on work-family segmentation. The researchers found that an organisation's work-family segmentation norms have a significant impact on the degree to which employees engage in work-related use of ICT. Findings also showed that work-related ICT has a potential negative impact on work-family conflict, as shown in previous studies (Haris et al., 2015; Carlson et al., 2017).

There is still an insufficient number of empirical studies on segmentation norms and its impact on psychological detachment. It is possible that an employee's perception of the boundary management behaviours of others within their organisations influence that employee's own segmentation behaviour and, as a result, their psychological detachment. Thus, the next objective of this study is to better understand how organisational cultures impact employees' boundary management approaches. With this knowledge, organisations can encourage employees to utilize strategies that enable them to set clear boundaries between work and home lives (Derks & Bakker, 2014). Therefore, the second research hypothesis is to test the proposition that employees' perceptions of high segmentation norms within their organisations will lead employees to adopt segmentation strategies as well, leading to better psychological detachment.

Hypothesis 2: Perceived segmentation norm is expected to be positively associated with psychological detachment.

3.3 Communication Technology During Leisure Hours and Psychological Detachment

Communication technology (CT) influences all areas of life in modern societies. It has become an integral part of both work and personal time (Day, Scott, & Kelloway, 2010) and has provided various benefits for employees and workers (Mamaghani, 2006). However, past research has found that the use of CT for work-related purposes during rest periods shifts boundaries between home and work (Day et al., 2010; Rothbart & Olliver-Malaterre, 2015; Towers et al., 2006). Boundaries (e.g., physical, temporal, behavioral) serve to structure and demarcate the various roles an individual maintains in different domains. However, CTs allow for greater work-life integration, thereby allowing the line between domains to blur (Batt & Valcour, 2003; Chesley, Moen, & Shore, 2003; Fenner & Renn, 2004; Valcour & Hunter, 2005). The use of CT in such a manner is a dual-edged sword, as it comes with both increased flexibility for employees and

expectations from managers and colleagues (Towers et al., 2006). CT makes it easier for work to overlap with family time and may also result in a greater workload.

Organisations have a responsibility to make employees aware of the possible effects of using CT on their health. Research on strategies for managing boundaries has recently received growing attention from scholars and practitioners alike (Daniel & Sonnentag, 2016; Dumas & Sanchez-Burks, 2015). Derks and Bakker (2014) claim that intensive smartphone users have great potential to improve work-family relations if they engaged in activities that promoted psychological detachment and relaxation. It is also possible for organisations to help employees with this segmentation process by developing training programs that encourage psychological detachment (Moreno-Jiménez et al., 2009). Barber and Jenkins (2013) suggested that creating boundaries around technology may provide individuals with sufficient respite, protecting their recovery processes and their well-being. By managing the use of CT through boundary creation, employees would be able to maintain or increase their psychological detachment (Barber & Jenkins, 2013).

Employees have conflicting views about the impact of CT on their work and home domains. Wajcman, Bittman, and Brown (2008) found that smartphone users were able to control the extent to which calls interrupt their personal life. They could choose when to switch off their phone and when to respond to messages. Moreover, a study on over 33,000 Canadian office workers found that roughly 70% of employees claimed that the use of CT for work during leisure hours led to increased workloads and higher stress levels, but 68% indicated that CT made them more productive (Duxbury & Higgins, 2001); 38% also said that CT made it easier to maintain a balance between work and family. Conversely, Park et al. (2011) found that the use of CT was related to poorer psychological detachment. These inconsistent findings should be investigated in further detail to determine the actual effects of CT on boundary management and, in turn, recovery experiences such as psychological detachment. The present study therefore aims to address this research gap by examining the relationship between CT use during non-work hours and psychological detachment. The researcher hypothesizes that a greater use of CT is negatively associated with psychological detachment.

Hypothesis 3: Work-related technology usage during non-working hours is negatively associated with levels of psychological detachment.

3.4   The Mediating Role of Communication Technology
Many organisations have recently adopted WFH practices to ensure the safety and well-being of their employees during the on-going COVID-19 pandemic. A study recently conducted by Teodorovicz et al. (2021) looked at the impact of work-from-home (WFH) practices in light of the pandemic. Findings indicated that there is now a greater reliance on communication technology among organisations, however this is also accompanied by a new set of challenges. In particular, the study found that WFH can have negative effects on workers' mental health and well-being. Similar research has also reported that employees who engage in WFH practices have an increased likelihood of experiencing a blurring of boundaries between work and home life (Ciolfi and Lockley, 2018), social isolation (Werber, 2020), and greater stress which may result in burnout (Hayes, Priestley, Iishmakhametov, & Ray, 2020). These factors can affect longer-term effectiveness, creativity, and personal resilience on both a professional and personal level (Birkinshaw, Cohen, & Stach, 2020).

As the dimensions of work and home have begun to merge, it would be beneficial for both employees and organisations to seek methods for adapting to this change. A further examination of the influence of CT on the relationship between work-home segmentation and psychological detachment will allow researchers to gain a better understanding of the roles that boundary management and CT play in employee well-being. As Park et al.'s (2011) study previously found that the relationship between work-home segmentation preference and psychological detachment

was partially mediated by use of CT during off-work hours, the researcher aims to explore whether technology mediates the relationship between segmentation preference and psychological detachment. Park et al. (2011) also found that perceived segmentation norm was also negatively related to work-related technology use at home, which in turn was associated with psychological detachment from work. This suggests that segmentation norms may influence boundary management in the form of frequency of CT use. As such, the following hypotheses propose that CT mediates the relationship between segmentation preference and psychological detachment, as well as the association between perceived segmentation norms and detachment.

Hypothesis 4a: The relationship between segmentation preference and psychological detachment will be partially mediated by technology usage at home for work-related matters.

Hypothesis 4b: The relationship between perceived segmentation norm and psychological detachment will be partially mediated by technology use at home for work-related matters.

3.5 Psychological Detachment and Burnout

Burnout is an affective state that consists of emotional exhaustion, physical fatigue, and cognitive weariness (Schaufeli & Buunk, 2003; Shirom, 2003). According on the COR theory, burnout is an outcome of the prolonged exposure to stress, particularly from psychosocial factors at work (Melamed, Shirom, Toker, & Berliner, 2006). Burnout and work stress have been found to be negatively associated with employee well-being, job performance and satisfaction (Kristensen, Borritz, Villadsen & Christensen, 2005; Maslach & Leiter, 2016). Conversely, they are linked to greater levels of detachment, cynicism, as well as an increased desire to leave one's organisation (Coffeng et al., 2012). Aside from work-related stressors, recent research has also found that stress arising from personal issues such as problems with health, finances, and relationships may also lead to the formation of burnout (Peasley et al., 2020)

It is important to also take into consideration the impact of COVID-19 on work-related stress, burnout, and the challenges of working from home during the pandemic. Studies have shown that employees face greater levels of stress due to having insufficient physical space at home to complete their work, distractions from family members, lack of personal privacy due to having their virtual activities being monitored by their organisations, and so on (Kniffin, Narayanan, Anseel, 2020; Nell et al., 2020). A study by LeanIn.org and SurveyMonkey (2020) explored the impact of work-family stress during COVID-19 and reported that women were more likely to experience symptoms of stress and burnout in comparison to their male counterparts during the pandemic period. Women who were working full time whilst being married and with children were found to be doing 20 more hours of housework and caregiving a week on average than men, with single mothers and women of colour reporting higher levels.

In regards to psychological detachment, as psychological distancing serves as a buffer which protects workers from stressors, individuals who have poorer psychological detachment may eventually experience higher levels of burnout (Demerouti et al., 2009 (Sonnentag & Fritz, 2007), emotional exhaustion (De Jonge et al., 2012; Donahue et al., 2012) and psychological strain (Moreno-Jiménez et al., 2009). Poulsen et al. (2014) conducted a study in Queensland, Australia to investigate demographic and work-related factors that might be associated with burnout. They found that low psychological detachment from work during out-of-work hours was associated with higher levels of burnout. A following study yielded similar results: The recovery experiences of psychological detachment and relaxation had a strong negative relationship to burnout and well-being (Poulsen, Poulsen, Khan, Poulsen, & Khan, 2015).

While various studies have found that psychological detachment is related to better well-being, others have argued that detachment does not actually reduce strain (Burke, Koyuncu, & Fiksenbaum, 2009; Moreno-Jiménez et al., 2009) or burnout (Etzion et al., 1998). These findings may imply that the role which psychological detachment plays in the recovery process may not be

as large as initially thought. Another potential explanation is that other contextual factors may influence the impact of psychological detachment on reducing strain and burnout.

As burnout is a serious issue which can be detrimental to employee well-being (Coffeng et al., 2012), it is important to understand its antecedents and what can be done to reduce its effects. Therefore, this study aims to further explore the relationship between psychological detachment and burnout, and to make a contribution to the literature by adding to past burnout research. The fifth research hypothesis propositions that lower psychological detachment leads to higher levels of burnout due to prolonged strain.

Hypothesis 5: Individuals who have poorer psychological detachment are expected to have higher levels of burnout.

4. METHOD
4.1 Design and Participants
This study was conducted in 2017 via a quantitative, cross-sectional survey design with self-completed questionnaires. 224 participants took part from two large organisations and the general populations of Malaysia and Norway took part in this study. The questionnaire was translated into Norwegian using the back-translation technique for distribution to participants (Brislin, 1970) (see Appendix C). This was done to achieve a different language version of the questionnaire that was conceptually equivalent to Norwegian culture. The samples were combined to increase analysis power and to reduce any restriction of range that may have been present due to the nature of the work of employees within the organisations. 297 participants took part initially, but 73 individuals did not complete the questionnaire (25% dropout rate). Incomplete responses to the questionnaire were not retained or analysed.

162 participants were female (72%) and 62 were male (28%), with 23% aged 18-24 years, 20% aged 25-34 years, 15% aged 35-44 years, 28% aged 45-54 years, 14% aged over 55 years. Most participants were employed in the healthcare (46%) and finance (21%) sectors. The organisational tenure of participants ranged from 0-5 years (42%), 5-10 years (13%), 10-20 years (12%), and over 20 years (34%).

The participants' background data were summarised in table x.

Criteria	Data
Gender	Male 28% Female 72%
Age	18-24 years - 23%, 25-34 years - 20%, 35-44 years - 15%, 45-54 years - 28%, Over 55 years - 14%
Industry	Health - 46%, Finance - 21%, Others - 33%
Organization Tenure	0-5 years - 42%, 5-10 years - 13%, 10-20 years - 12% Over 20 years - 34%

4.2 Measures
Work-home segmentation preference was measured using the 4-item scale developed by Kreiner (2006). Respondents were asked "I don't like to have to think about work while I'm at home," "I prefer to keep work life at work," "I don't like work issues creeping into my home life," "I like to be able to leave work behind when I go home," with a 5-point response scale where 1 = *strongly disagree* and 5 = *strongly agree* ($α = 0.85$). Refer to Appendix B for all questionnaire measures.

Perceived segmentation norms were measured using 4 items that were adapted from Kreiner's segmentation scale by Park et al. (2011). Participants indicated the extent to which they agreed with each statement regarding norms in their workplace: "The people I work with prevent work issues from creeping into their home life," "The people I work with keep work matters at work," "The people I work with don't think about work while they are at home," "The people I work with like to be able to leave work behind when they go home," with 1 = *strongly disagree* and 7 = *strongly agree* (α = 0.80).

Communication technology use was measured in the questionnaire using two items which were adapted from Park et al.'s (2011) original scale. Participants answered how often they used certain communication technologies (computers, laptops, tablets, and mobile phones) to communicate on work matters during non-work hours. These responses were measured using a 5-point Likert-type scale where 1 = *almost never* and 5 = *very often* (α = 0.78).

Psychological detachment during off-work time was measured using the detachment subscale from the Recovery Experiences Questionnaire (Sonnentag & Fritz, 2007). Psychological detachment is a subscale of the REQ, consisting of 4 items and a 5-point Likert scale ranging from strongly disagree to strongly agree. These items included "*I distance myself from work," "I don't think about work at all," "I forget about work,"* and "*I get a break from the demands of work.*" (α = 0.87).

Burnout experienced at work was measured using the 14 item Shirom-Melamed Burnout Measure (α = 0.95) (Shirom & Melamed, 2006). This measure views burnout as a mental condition that is a result of the prolonged exposure to organisational stress. Respondents reported on feelings of physical fatigue, cognitive weariness, and emotional exhaustion at work on a 7-point Likert scale (1 = *almost never*; 7 = *almost always*). These interrelated factors produce a single score of burnout (Hobfoll & Shirom, 2000).

Control variables can be found to be associated with some predictive capacity at predicting a dependent variable above and beyond the independent variable(s), although they are not the variables of primary interest. As such, their possible effects are controlled for. The Big Five personality dimensions: Extroversion (α = .60), openness to experience (α = .54), agreeableness (α = .36), neuroticism (α = .51), and conscientiousness (α = .44) were measured using a 5-point Likert scale consisting of 10 items (Rammstedt & John, 2007). In addition, demographics (i.e. gender, age, nationality, professional field, and hours worked per week) were also controlled for.

4.3 Procedure
The researcher invited participants to take part in a study about how different types of communication technologies affected people's work and home lives. Organisations were contacted and provided with basic information regarding the study. Permission was requested for the distribution of the questionnaire to employees. Once the organisations had consented to participating, an email was sent to employees by their organisation inviting them to take part and providing them with a link to the questionnaire on the Qualtrics Survey Platform. As the link to the questionnaire is a shared one, all participant responses remained anonymous. Surveys could be accessed by laptop, desktop, smartphone or tablet. The questionnaire link was also sent to individual participants from the general population. The snowball sampling method was used; Participants were encouraged to send the questionnaire link to others to complete.

The first section of the questionnaire contained an information sheet which briefly explained the aim and nature of the study, assuring participants that responses would remain anonymous and confidential. Participants were informed that they were not obligated to take part and that their responses would be omitted should they choose to withdraw. They were told that by choosing to click to the following page, they acknowledged this information and gave their consent to take

part in the study. Participants were thanked for their contributions at the end of the questionnaire. Once a sufficient number of participants responded to the questionnaire, the data was exported from the Qualtrics website and analysed.

4.4 Analytical Strategy

The researcher used the IBM SPSS Statistics 23 (IBM Corp, 2015), a statistical software, to conduct the following analyses. Please refer to Appendix D for all SPSS analyses output. A hierarchical regression was done to test hypotheses 1, 2, and 3, which investigated whether work-home segmentation, perceived segmentation preference, and CT use during leisure hours predict psychological detachment while controlling for certain variables.

To test hypotheses 4a, which proposed the presence of a mediation of CT use between work-home segmentation preference and psychological detachment, bootstrapping was conducted using the Macro PROCESS extension of SPSS (Hayes, 2013). A similar analysis was also conducted to test hypothesis 4b for the potential mediation of CT on the relationship between perceived segmentation norms and psychological detachment. The extension is based on Baron and Kenny's (1986) original 4-step mediation process. However, the extension also allows for the observation of the indirect effects of the mediator on the relationship between the predictor and outcome variables. Kappa-squared was not included in the analysis as Wen and Fan (2015) found that the equation which produced the maximum indirect effect contained a mathematical error. Kappa-squared was therefore deemed to be an inappropriate measure of mediation effect size and was eliminated from PROCESS macro as of version 2.16 (Hayes, 2013).

Hypothesis 5, which postulates a negative relationship between psychological detachment and burnout, was verified using a hierarchical regression which controlled for the same variables above (gender, age, etc.).

5. RESULTS

5.1 Preliminary Analyses

Descriptive statistics and bivariate correlations for all study variables are displayed in Table 1. As shown, there was a significant positive association between work-home segmentation preference and psychological detachment ($r = 0.42$, $p < .001$). Further, employees' perceived segmentation norms and psychological detachment are significantly positively related ($r = 0.42$, $p < .001$). Psychological detachment was found to have a significant negative association with CT ($r = -0.37$, $p < .001$). While there was a significant negative association between work-home segmentation preference and CT ($r = -0.23$, $p < .001$), perceived segmentation norms had a non-significant relationship with CT ($r = -0.13$, $p = .051$). There was also a non-significant relationship between psychological detachment and burnout ($r = -0.06$, $p = .387$). These findings will be addressed in the discussion.

With regard to control variables, age, gender, nationality, professional field, and hours worked per week were significantly correlated with certain variables included in the model. This was also the case for the Big 5 personality dimensions with the exception of openness to experience. Thus, the above variables were included in the subsequent analyses.

5.2 Predictors of Psychological Detachment

Prior to carrying out any statistical analysis, it is important to test for the presence of biases with the use of assumptions. The violation of an assumption is an indication that the test statistic and p-value may be inaccurate (Field, 2014). An investigation of the scatterplot, P-P plot and histogram led to the conclusion that the assumptions of homoscedasticity, normal distribution of errors, linearity, and multicollinearity were met. The various diagnostics (i.e. Cook's distance, average leverage value, Mahalanobis distance, and maximum standardized DFBeta) also indicate that there appears to be no influential cases within the data.

	Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	Gender[a]	1.72	0.45	__	.22**	.34**	-.09	-.34**	-.15*	-.11	.04	-.04	.21	-.17*	.15*	.13*	-.19**	.10
2.	Age[b]	2.91	1.42		__	.45**	-.19**	-.20**	.13	-.12	.12	-.30**	.44**	-.38**	-.07	.07	-.10	.03
3.	Nationality[c]	2.33	0.92			__	-.01	-.22**	.30**	-.31**	.04	-.36**	.44**	-.57**	-.01	.05	-.17*	-.02
4.	Professional field[d]	3.09	2.34				__	.19**	.10	.02	-.05	.01	.01	.02	-.08	-.20**	.05	-.24**
5.	Hours worked[e]	1.49	0.78					__	.08	.03	.04	-.00	-.08	.17	-.08	-.24**	.29**	-.23**
6.	Extroversion	7.31	1.71						__	-.05	.20**	-.34**	.36**	-.30**	-.02	-.02	.10	-.11
7.	Openness	6.64	1.83							__	.02	.15*	-.18**	.12	.10	.04	-.04	.08
8.	Agreeableness	7.45	1.35								__	-.30**	.29**	-.17*	.02	.12	.02	.05
9.	Neuroticism	4.78	1.56									__	-.45**	.52**	.03	-.16*	.09	-.12
10.	Conscientiousness	7.73	1.60										__	.50**	.07	.12	-.01	.01
11.	Burnout	34.32	15.72											__	.14*	-.15*	.14*	-.06
12.	WSP	21.68	4.55												__	.25**	-.23**	.42**
13.	PSN	17.45	4.71													__	-.13	.42**
14.	CT	5.97	2.23														__	-.37**
15.	PD	12.28	3.87															__

*p < .05; **p < .01.

Note. N = 224. [a]Gender: 1 = Male, 2 = Female; [b]Age: 1 = 18-24 years old, 2 = 25-34 years old, 3 = 35-44 years old, 4 = 45-54 years old, 5 = 55-64 years old, 6 = 65-75 years old, 7 = >75 years old; [c]Nationality: 1 = Malaysian, 2 = EU/British, 3 = Norwegian, 4 = Other; [d]Professional field: 1 = Finance, 2 = Healthcare, 3 = Law, 4 = Education, 5 = Engineering, 6 = Hospitality, 7 = Management, 8 = Media, 9 = Other; [e]Hours worked per week: 1 = Up to 40 hours, 2 = Up to 50 hours, 3 = Up to 60 hours, 4 = More than 60 hours

TABLE 1: Means, Standard Deviations, and Correlations Between Study Variables.

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Variable	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Gender	.42	.62	.05	.65	.62	.08	-.11	.54	-.01
Age	-.08	.20	-.03	-.19	.21	-.07	.01	.18	.00
Malaysian vs. UK/British	.40	1.32	.02	-.18	1.32	-.01	.21	1.13	.01
Malaysian vs. Norwegian	-.52	.63	-.07	-.75	.68	-.09	-.75	.58	-.09
Professional field	-.35	.11	-.21**	-.33	.11	-.20**	-.23	.10	-.14*
Hours worked per week	-.97	.35	-.20**	-.96	.35	-.20**	-.38	.31	-.08
Extroversion				-.27	.16	-.12	-.13	.14	-.06
Agreeableness				.08	.20	.03	.02	.17	.01
Neuroticism				-.49	.19	-.20*	-.33	.17	-.13*
Conscientiousness				-.01	.20	-.01	-.12	.17	-.05
Work-home segmentation preference							.25	.05	.29**
Perceived segmentation norms							.21	.05	.26**
Communication technology use							-34	.09	-.24**
R^2			.10			.14			.39
ΔR^2			.10**			.04			.25**

$p < .05$; **$p < .01$.

TABLE 2: Hierarchical Multiple Regression Analysis Predicting Psychological Detachment from Work-Home Segmentation Preference, Perceived Segmentation Norms, and Communication Technology.

A hierarchical regression was conducted to predict psychological detachment based on work-home segmentation preference, perceived segmentation norms, and CT. Control variables were entered in the first step. Dummy coding was used for nationality to attain the linearity assumption. The results presented in Table 2 show that of the control variables, professional field (β = -.21, p < .001) and hours worked per week (β = -.20, p < .001) were negatively associated with psychological detachment. Upon entering the personality dimensions (extroversion, agreeableness, neuroticism, and conscientiousness) in the second step, neuroticism (β = -.20, p < .05) was also found to have a significant negative relationship with psychological detachment.

The predictor variables, work-home segmentation preference, perceived segmentation norms, and CT use were entered as the third step. Standardized regression coefficients were termed small, medium, or large if they met or exceeded the values of .10, .30, and .50, respectively (Cohen, 1988). Results showed that both work-home segmentation preference (β = .29, p < .001) and perceived segmentation norms (β = .26, p < .001) were positively associated with psychological detachment (see Table 2). Thus, hypotheses 1 and 2 are supported. In particular, higher levels of work-home segmentation preference predicted better psychological detachment. Greater perceived segmentation norms also significantly predicted improved psychological detachment. In support of hypothesis 3, a higher use of CT during leisure hours was found to be related to lower levels of psychological detachment β = -.24, p < .001 (see Table 2).

5.3 Bootstrapped Mediation Analyses

Process MACRO extension on SPSS was used to determine whether use of CT mediated the relationships between work-home segmentation preference and psychological detachment (H4a), as well as perceived segmentation norms and psychological detachment (H4b) (Hayes, 2013). The analysis was bootstrapped to test the significance of the indirect effect. The extension is based on Baron and Kenny's (1986) four-step process for mediation analysis, hence it was used as an alternative to a four-step hierarchical regression.

5.4 CT Use, Work-Home Segmentation Preference, and Psychological Detachment

The total effects of the bootstrapped mediation analysis indicated that there was a strong relationship between work-home segmentation preference and psychological detachment (see Table 3). Furthermore, for the mediation hypothesis, adding CT use reduced the effects of the relationship. The significance of the indirect effect (i.e. the pathway between work-home segmentation preference on psychological detachment through CT) was then tested. Hypothesis 4a was supported as there was a significant indirect effect of segmentation preference on psychological detachment through CT, b = 0.06, BCa CI [.0215, .1089].
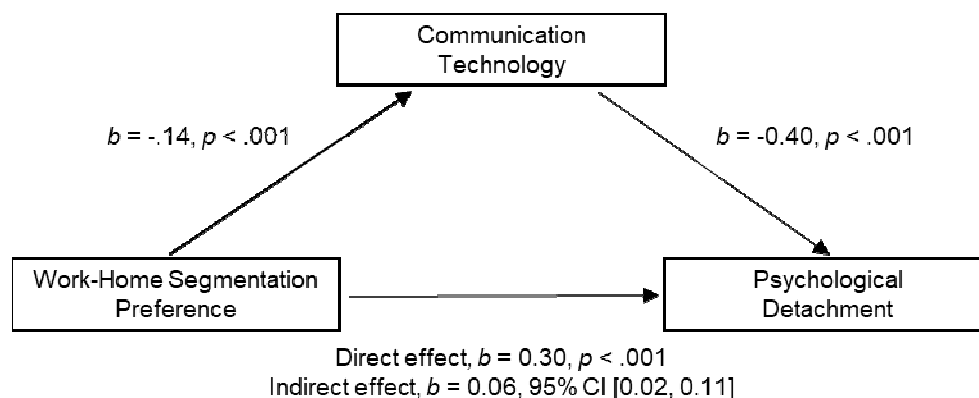

FIGURE 1: Model of Work-Home Segmentation as a Predictor of Psychological Detachment, Mediated by Communication Technology. The confidence interval for the indirect effect is a BCa bootstrapped CI based on 5000 samples.

5.5 CT Use, Work-Home Segmentation Preference, and Psychological Detachment

As shown in the previous hierarchical regression data, the mediation analysis found a strong relationship between perceived segmentation norms and psychological detachment (see Table 4). However, adding CT use did not reduce the effects of the relationship. Contrary to hypothesis 4b, there was a non-significant indirect effect of CT on the relationship between perceived segmentation norms and psychological detachment, b = 0.004, BCa CI [-.001, .079]. Thus, Hypothesis 4b was not supported.
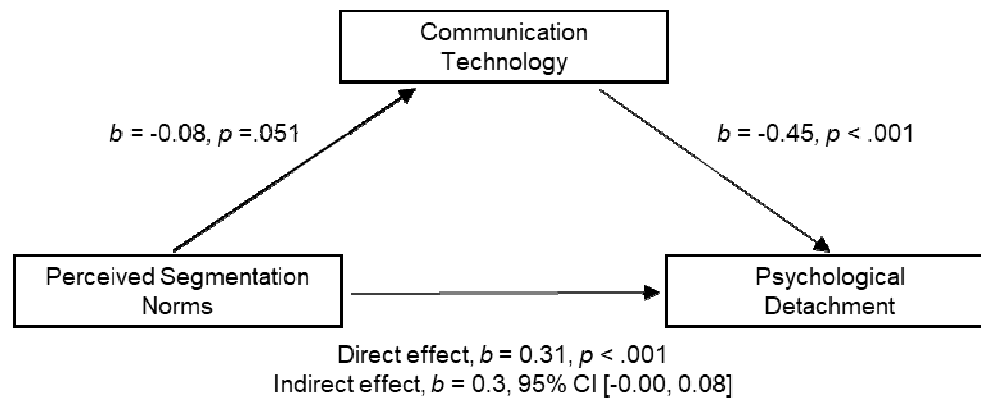

FIGURE 2: Model of Perceived Segmentation Norms as a Predictor of Psychological Detachment, Mediated by Communication Technology. The confidence interval for the indirect effect is a BCa bootstrapped CI based on 5000 samples.

5.6 Psychological Detachment and Burnout

Another hierarchical regression was run to investigate whether psychological detachment was negatively associated with levels of burnout. The assumptions of homoscedasticity, linearity, multicollinearity, and normal distribution of errors are met. As with the previous regression analysis, control variables were entered as the first step. Age (β = .16, p < .05) was found to be positively associated with burnout, whereas nationality (Malaysian vs. Norwegian) (β = -.53, p < .001) was negatively associated with burnout. Upon entering the personality dimensions in the second step, the analysis indicated that neuroticism was positively associated to burnout (β = .29, p = < .001), while there was a significant negative relationship between conscientiousness and burnout (β = -.18, p = < .001).

Psychological detachment was entered as the predictor variable in the third step. Contrary to Hypothesis 5, there was a non-significant relationship between psychological detachment and levels of burnout (β = -.02, p = .698). There findings will be explored further in the discussion.

Variable	Model 1			Model 2			Model 3		
	B	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Gender	2.38	2.15	.07	2.19	1.96	.06	2.24	1.97	.06
Age	-1.76	.70	.16*	-.41	.66	-.04	-.42	.67	-.04
Malaysian vs. UK/British	-2.89	4.55	-.04	1.69	4.15	.02	1.67	4.16	.02
Malaysian vs. Norwegian	-17.25	2.18	-.53**	-12.01	2.13	-.37**	-12.07	2.14	-.37**
Professional field	-.14	.38	-.02	.00	.35	.00	-.03	.36	-.00
Hours worked per week	1.10	1.20	.05	1.97	1.09	.10	1.89	1.12	.09
Extroversion				-.33	.51	-.04	-.36	.52	-.04
Agreeableness				-.17	.62	-.02	-.16	.62	-.01
Neuroticism				2.93	.60	.29**	2.89	.61	.29**
Conscientiousness				-1.80	.62	-.18**	-1.80	.62	-.18**
Psychological detachment							-.08	.22	-.02
R^2			.36			.49			.49
ΔR^2			.36**			.13**			.00

$p < .05$; **$p < .01$.

TABLE 3: Hierarchical Multiple Regression Analysis Predicting Burnout from Psychological Detachment

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6. DISCUSSION

The present cross-sectional study aimed to investigate the role of CT on boundary management and well-being. It sought to determine whether segmentation preferences and perceived segmentation norms were positively associated with psychological detachment and, if so, whether CT was a mediator of these relationships. The study also looked at the direct relationship between CT and psychological detachment, as well as whether psychological detachment was a predictor of burnout.

An online questionnaire was answered in full by 224 participants and their responses were analysed using hierarchical regression and mediation analyses. The findings indicated that there was a positive association between work-home segmentation preferences and psychological detachment. CT was also shown to be a mediator of this relationship. Moreover, employees' perceived segmentation norms and their levels of psychological detachment were also positively associated. However, the current study did not find CT to be a mediator in this relationship. As predicted, there was also a negative relationship between the use of CT during off-work hours and psychological detachment. Finally, psychological detachment was not found to be related to levels of burnout.

6.1 Theoretical Contributions

This study makes several contributions to well-being literature. A very specific set of measures was utilized for communication technology use, segmentation preference and norms, and psychological detachment. The predictors were also found to explain psychological detachment above and beyond variables such as demographics, personality, hours worked per week, and professional field. First, the study demonstrated that employees' personal preferences towards integration or segmentation influence their boundary management behaviour and therefore their psychological detachment. This relationship was also mediated by the use of communication technology. In particular, individuals who had a higher preference towards segmentation utilized boundary management strategies while at home, which in turn led to greater psychological detachment. These findings contribute to the ongoing strand of boundary management research by providing much needed empirical evidence and support for previous studies (Foucreault et al., 2016; Park et al., 2011).

The findings regarding the positive association between perceived segmentation norms and psychological detachment is in line with previous research (Park et al., 2011). Contrary to Park et al.'s (2011) findings, the use of CT was not found to be a significant mediator between this relationship. It is possible that individuals may adopt different strategies depending on their motivation for using particular boundary management strategies to reduce work-related stress. For instance, employees who already favour segmentation may prefer to limit their CT use as their main strategy. However, those who choose to segment because they perceive that others within their organisation do so may utilize different approaches rather than merely controlling the amount of CT use outside of working hours. These may include not completing work-related tasks while at home, engaging in relaxing activities, spending time with family or friends, and so on. This may be a possible avenue for future research.

Another key finding was that CT was related to poorer psychological detachment. Thus, employees who used CT to for work-related purposes while at home experienced more difficulties with mentally disengaging from work. These findings are consistent with those of previous studies (Park et al., 2011; Towers et al., 2006). Another major finding was that an increased use of communication technology studies (Duxbury & Higgins, 2001; Park et al., 2011), providing support of the influence of CT use on employee well-being and stress. Overall, this study found that due to technology-related work conditions which can cause overlaps between work and home domains, it is more important than ever for employees to maintain healthy boundaries to recover from job demands.

This study also found a non-significant relationship between psychological detachment and levels of burnout, which is inconsistent with previous findings (Poulsen et al., 2014; Sonnentag & Fritz, 2007). This discrepancy may be due to the use of different measures of burnout: The current study utilized the SMBM (Shirom & Melamed, 2006), while Poulsen et al. (2014) and Sonnentag & Fritz (2007) used the Oldenburg Burnout Inventory (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). However, the SMBM was found to be a very reliable measure of burnout in the current study (α = 0.95).

Another potential explanation for these findings was that while this study focused on psychological detachment, previous studies have found that other recovery experiences such as mastery experiences, relaxation, and control during leisure time also have an impact on well-being and burnout (Sonnentag & Fritz, 2007). Furthermore, the majority of participants in the current study are from the healthcare and finance sectors where employees tend to experience long working hours in their workplaces (Caruso, 2014; Wharton & Blair-Loy, 2006). As such, they have less time away from work and may have developed behaviours to maintain their recovery processes without the use of detachment strategies. For instance, they may rely more heavily on other recovery experiences compared to psychological detachment. It may be beneficial to include several measures for these diversionary strategies in future studies.

6.2 Limitations and Future Research

The study has several limitations which should be acknowledged. First of all, the self-report nature of the questionnaire may have led to an overestimation of the relationships as a result of common-method variance. However, various studies have argued that common-method variance is not a large issue, but rather an oversimplification of the true nature of affairs (Spector, 2006).

Furthermore, the cross-sectional design of the study limits the inferences of causality. Longitudinal studies with various time points are more useful for establishing causal relations between psychological detachment and burnout. It may therefore be advantageous to collect data with several measurement occasions in order to determine if there is indeed a potential relationship.

A third limitation associated with the methodology is that the majority of the sample was comprised of women (72%). This may have an impact on results as women have been found to detach more easily than men as they are more involved in household activities (Sonnentag & Kruel, 2006). Moreover, other researchers have found that in terms of burnout, women are more likely to get emotionally exhausted than men while men tend to depersonalize more than women (Purvanova & Muros, 2010). As such, future studies should aim to obtain a more balanced sample.

In addition, while the translation of the English questionnaire into Norwegian was conducted in a very thorough manner, there may be room for error. There is a risk of losing specific social and cultural aspects during the translation process. However, most of the questionnaire items in the present study consist of multiple-choice answers, which provide a certain level of standardization. Despite these limitations, this study is, to the best of the researcher's knowledge, the first study to analyse the impact of CT use on boundary management and psychological detachment in both Malaysia and Norway. This study contributes to the gap in existing research on the role that CT use plays on employee well-being. Furthermore, as relatively large sample size (N = 224) was utilised, responses were more representative of the general population and provided a wider range of data for analysis. It also improved the statistical power of tests, which increased the likelihood of obtaining an effect size.

6.3 Implications for Practice

The findings have direct implications for organisations and policy makers. Firstly, the knowledge that a preference for segmentation has a positive impact on employee well-being suggests that

several courses of action can be taken by organisations in order to improve the well-being of their employees. Organisations could provide candidates with a job preview of their company's culture during the recruitment process (Foucreault et al., 2016). This would allow candidates to take into consideration whether their boundary management strategies and behaviours were compatible with organisation norms while evaluating on an employment offer. Conversely, organisations would also be able to avoid hiring candidates whose preferences are incongruent with their culture to limit employee dissatisfaction and exhaustion.

As many organisations have begun to adopt work-from-home practices due to the COVID-19 pandemic, this has led to a blurring of boundaries between work and home lives which may lead to a negative impact on mental health (Cleavenger & Munyon, 2017; Teodorovicz et al., 2021). There are various strategies and best practices that organisations can choose to adopt to promote boundary setting and manage the amount of CT usage, which can enable them to protect the mental health and well-being of their employees. This can include organising mental health campaigns and workshops for employees to raise awareness of work-life balance, boundary management, and burnout. Organisations may also provide in-house counsellors or enable employees to claim for external counselling sessions. Furthermore, action can also be taken by leadership or management, such as scheduling 1-1 check-in sessions with their respective teams to offer social support and maintain a sense of community (Gibbs et al., 2021; Tafvelin et al., 2019). With regards to boundary management, organisations may also encourage employees to take frequent breaks, socialise, engage with their physical surroundings, spend more time in nature, exercise, and rest (Gibbs et al., 2021; Teodorovicz et al., 2021). Potential policies also include establishing official working hours to prevent employees from being overworked (Rahman & Arif, 2021), allowing employees to end work early on Fridays, or incorporating "no-meeting" Fridays.

As there is now an increased usage and reliance on CT as part of WFH practices, it would be beneficial for organisations to upskill employees to utilise these technologies as this will improve efficiency and ways of working (Rahman & Arif, 2021). On a similar note, organisations may also consider providing employees with a dedicated allowance for the purchase of appliances for their home office set-up. This can include working chairs, desks, monitors, keyboards, internet routers, and so on. This may enable a more conducive environment for working, resulting in a better WFH experience overall. The use of CT tools may also help with boundary setting in a WFH environment. For instance, the Microsoft Analytics "Focus time" feature may be used to schedule quiet time in work calendars for completion of individual tasks.

Moving forward, further light needs to be shed on the impact of WFH conditions during and after the COVID-19 pandemic, particularly on the areas of employee well-being, productivity, and best practices. Other potential areas of research may be on the possible long-term effects of WFH on employees' mental & physical well-being, as well as how organisations can approach boundary management and burnout in the long run. Moreover, it would be interesting to examine organisations that are considering to shift to WFH permanently or to a hybrid version (for instance, 50% of working hours based in physical office location and 50% based at home/remotely), and explore if and how this arrangement can be made feasible.

7. CONCLUSION

This study provides vital new insights into contemporary working life. Intensity of work has increased significantly in recent years due to the rapid development of global markets and improvement in communication technologies (Wang, Shu, & Tu, 2008). One of the implications of this is the unstable boundaries between work and home lives (Towers et al., 2006). The key findings of this study support the proposition that the use of CT during off-work hours is associated with poor psychological detachment. On the other hand, employees who had a preference for segmentation were also found to use less CT, which was associated to improved

psychological detachment. The perception of segmentation norms within organisations was also positively associated with psychological detachment. These findings emphasize the vital role that boundary management plays in the recovery process and well-being of employees. This was aligned to organization and management theory reviews (Cristofaro et al., 2021). In future, more research is needed to address how communication technologies impact boundaries and recovery, particularly during and after the COVID-19 pandemic. Practically, policies can be implemented by organisations to encourage boundary control, which may lead to increased psychological detachment, reduced burnout, and the improved well-being of employees.

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9. APPENDICES

Appendix 1 - Questionnaire (English Version)

Please read these points carefully before you start completing the questionnaire.

- This research is being conducted by Fride Dimmen Stokke and Laura Lai as part of the MSc Organisational Psychology degree at City, University of London. The research is supervised by Dr. Paul Flaxman who works as a Senior Lecturer in Organisational Psychology at City, University of London.

- The aim of this research is to see how different types of communication technologies affects people's work and home life.

- If you are 18 years of age or older and in full-time employment, you are suitable to take part in this research.

- You will be completing an online questionnaire that will ask you about your personality, feelings and thoughts about work, and features of your work. The questionnaire will take **10 - 15 minutes** to complete.

- Your participation in this research is entirely voluntary. If you do not want to complete the questionnaire you do not have to. Also, you may withdraw at any stage without having to explain why.

- Your responses to this questionnaire will be **strictly confidential** and anonymised prior to analysis. In other words, no one will be linking your name to your responses to the questions asked.

- Once you have completed the questionnaire, you may choose to write down your email address if you would like to learn more about the research and the key findings. Your email address will not be included alongside your responses to the questionnaire.

- This study has been approved by members of the Research Ethics Committee at City, University of London (Psychology Department). The Ethics Reference Number is XXXXXX.

Once you have read and understood these points, please click the arrow button below to access the questionnaire.

Laura Lai

Demographics

1. **What is your gender?**
    Male/Female

2. **What is your age?**
    □ 18-24 years old   □ 55-64 years old
    □ 25-34 years old   □ 65-74 years old
    □ 35-44 years old   □ 75 years or older
    □ 45-54 years old

3. **What is your nationality?**
    □ Malaysian   □ Norwegian
    □ EU/British   □ Other _____

4. **What is your marital status?**
    □ Single, never married   □ Divorced
    □ Married or domestic partnership   □ Separated
    □ Widowed

5. **How many children do you have that are under the age of 18?**
    □ None   □ 4
    □ 1   □ 5
    □ 2   □ 6
    □ 3

6. **What is your highest level of education?**
    □ Secondary education   □ Master's degree
    □ College/Diploma/Other further   □ Doctorate degree
    education   □ Other _____
    □ Bachelor's degree

7. **What is your professional field?**
    □ Finance   □ Hospitality
    □ Healthcare   □ Management
    □ Law Enforcement   □ Media
    □ Education   □ Other
    □ Engineering

8. **If other, please state:** _____

9. **What is the name of the company that you work for?** _____

10. **How long have you been working for this company?**
    □ 0-5 years   □ 10-20 years
    □ 5-10 years   □ Over 20 years

11. **What level is your position in your company?**
    □ Associate / Senior Associate
    □ Supervisor / Manager / Principal
    □ Executive Director / Partner

12. **How many hours do you work per week?**

□ Up to 40 hours (9am-5pm)   □ Up to 60 hours (9am-9pm)
□ Up to 50 hours (9am-7pm)   □ More than 60 hours

13. How much time do you normally spend travelling to and from work?
□ Up to 1 hour
□ Up to 2 hours

□ Up to 3 hours
□ More than 3 hours

Features of Your Personality

The next items assess some of the most common personality characteristics. Please indicate how well each item describes your own personality by clicking your level of agreement.

I see myself as someone who…

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly disagree
1. …is reserved	1	2	3	4	5
2. …is generally trusting	1	2	3	4	5
3. …tends to be lazy	1	2	3	4	5
4. …is relaxed, handles stress well	1	2	3	4	5
5. …has artistic interests	1	2	3	4	5
6. …is outgoing, sociable	1	2	3	4	5
7. …tends to find fault in others	1	2	3	4	5
8. …does a thorough job	1	2	3	4	5
9. …gets nervous easily	1	2	3	4	5
10. …has an active imagination	1	2	3	4	5
11. …is considerate and kind to almost everyone	1	2	3	4	5

Laura Lai

How Do You Feel at Work?

Below are a number of statements that describe different feelings that you may feel at work. Please indicate how often, in the past 30 workdays, you have felt each of the following feelings:

	Never or almost never	Very infrequently	Quite infrequently	Sometimes	Quite frequently	Very frequently	Always or almost always
1. I feel tired	1	2	3	4	5	6	7
2. I have no energy for going to work in the morning	1	2	3	4	5	6	7
3. I feel physically drained	1	2	3	4	5	6	7
4. I feel fed up	1	2	3	4	5	6	7
5. I feel like my "batteries" are "dead"	1	2	3	4	5	6	7
6. I feel burned out	1	2	3	4	5	6	7
7. My thinking process is slow	1	2	3	4	5	6	7
8. I have difficulty concentrating	1	2	3	4	5	6	7
9. I feel I'm not thinking clearly	1	2	3	4	5	6	7
10. I feel I'm not focused in my thinking	1	2	3	4	5	6	7
11. I have difficulty thinking about complex things	1	2	3	4	5	6	7
12. I feel I am unable to be sensitive to the needs of coworkers and customers	1	2	3	4	5	6	7
13. I feel I am not capable of investing emotionally in coworkers and customers	1	2	3	4	5	6	7

14. I feel I am not capable of being sympathetic to co-workers and customers	1	2	3	4	5	6	7

Features of Your Work

After office hours,

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. I distance myself from work.	1	2	3	4	5
2. I don't think about work at all.	1	2	3	4	5
3. I forget about work.	1	2	3	4	5
4. I get a break from the demands of work.	1	2	3	4	5

Please indicate how much you agree with the following statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. I don't like to have to think about work while I'm at home.	1	2	3	4	5
2. I prefer to keep work life at work.	1	2	3	4	5
3. I don't like work issues creeping into my home life.	1	2	3	4	5
4. I like to be able to leave work behind when I go home.	1	2	3	4	5

Please indicate how much you agree with the following statements:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. The people I work with prevent work issues from creeping into their work life.	1	2	3	4	5
2. The people I work with keep work matters at work.	1	2	3	4	5
3. The people I work with don't think about work while they are at home.	1	2	3	4	5
4. The people I work with like to be able to leave work behind when they go home.	1	2	3	4	5

Work and Communication Technology

How often do you use these technologies to communicate on work matters while at home during non-work hours?

	Almost never	Sometimes	Neutral	Often	Very often
Computers/Laptops/Tablet	1	2	3	4	5
Mobile phones	1	2	3	4	5

When do you normally switch off your communication devices after work hours?

☐ When I reach home   ☐ After 10 pm

☐ Before 8pm   ☐ Never

☐ 8-10pm

Laura Lai

Appendix 2 - Questionnaire (Norwegian Version)

Kjære deltaker, vennligst les disse punktene nøye før du begynner å fylle ut spørreskjemaet.

Bakgrunn og formål

- Denne undersøkelsen gjennomføres av Fride Dimmen Stokke og Laura Lai som del av en masteravhandling i Organisasjonspsykologi ved City, University of London. Forskningen er veiledet av Dr. Paul Flaxman som er professor i Organisasjonspsykologi ved City, University of London.
- Formålet med undersøkelsen er å kartlegge hvordan ditt forhold til mobiltelefon, datamaskin, email og annen teknologi påvirker ditt liv på jobben og i hjemmet.

Hva innebærer deltakelse i studien?

- Deltakelse i studien innebærer å svare på et spørreskjema som først vil omhandle noen bakgrunnsspørsmål om deg og noen korte spørsmål om din personlighet. Deretter vil du bli spurt om dine tanker og følelser rundt arbeid og fritid, før ditt forhold til teknologi vil bli spurt om. Jeg håper du vil avse ca. **10 minutter** av din tid til å besvare undersøkelsen.
- Hvis du er **18 år eller eldre og jobber fulltid** er du egnet til å delta i denne undersøkelsen.

Hva skjer med informasjonen om deg?

- Alle personopplysninger og svar på spørreundersøkelsen vil bli **behandlet konfidensielt**, og ingen enkeltpersoner vil kunne gjenkjennes i oppgaven.
- Når spørreskjemaet er ferdig utfylt kan du velge å skrive ned e-postadresses din om du ønsker videre forklaring på studiet og/eller informasjon om de viktigste funnene. Av konfidensielle årsaker vil ikke e-postadressen din kobles til dine svar på spørreskjemaet.
- Alle svar vil være anonymiserte før analyse, og derfor vil ingen kunne koble navnet ditt til dine svar. Prosjektet skal avsluttes i September 2017, og personopplysninger vil da bli slettet.

Frivillig deltakelse

- Din deltakelse i denne undersøkelsen er helt frivillig. Du kan når som helst trekke ditt samtykke uten å oppgi noen grunn. Dersom du ønsker å trekke deg, vil alle opplysninger om deg bli anonymisert.
- Denne studien er godkjent av medlemmer av forskning- og etikkutvalget ved City, University of London (Psykologisk avdeling). Etikkreferansenummeret er **PSYETH (T/L) 16/17 150** .

Dersom du har spørsmål til studien, ta kontakt med:
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Laura Lai   laura.lai@city.ac.uk
Dr. Paul Flaxman   paul.flaxman.1@city.ac.uk

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Laura Lai

Når du har lest og forstått disse punktene, vennligst klikk på pilknappen nedenfor for å få tilgang til spørreskjemaet.

Takk for at du tar deg tid til å delta!

1. **Hvor gammel er du?**
   o 18-24 år
   o 25-34 år
   o 35-44 år
   o 45-54 år
   o 55-64 år
   o 65-74 år
   o 75 år eller eldre

2. **Kjønn:**
   o Mann
   o Kvinne

3. **Sivilstand:**
   o Ugift
   o Samboer
   o Gift
   o Separert
   o Skilt
   o Enke/Enkemann

4. **Hva er din høyest oppnådde utdanning?**
   o Grunnskole
   o Videregående
   o Bachelorgrad (3 år høyere utdanning)
   o Mastergrad (4-5 år høyere utdanning)
   o Doktorgrad/PhD
   o Annet

5. **Hvilket fagområde jobber du innen?**

6. **Hvor lenge har du jobbet innenfor dette fagområdet?**
   o 0-5 år
   o 6-10 år
   o 11-15 år
   o 16-20 år
   o Over 20 år

7. **Yrke (yrkestittel)**

8. **Hvor mange timer jobber du per uke?**
   o Opptil 40 timer
   o Opptil 50 timer
   o Opptil 60 timer
   o Mer enn 60 timer

Dine Personlighets- og Karaktertrekk

De neste utsagnene vurderer noen av de vanligste personlighetstrekkene. Benytt skalaen nedenfor og oppgi hvor godt hver enkelt utsagn beskriver din egen personlighet.

Jeg ser på meg selv som noen som...

	Helt uenig	Uenig	Verken enig eller uenig	Enig	Helt enig
…er reservert	☐	☐	☐	☐	☐
…generelt sett er tillitsfull	☐	☐	☐	☐	☐
… har en tendens til å være lat	☐	☐	☐	☐	☐
…er avslappet, håndterer stress godt	☐	☐	☐	☐	☐
…har få kunstneriske interesser	☐	☐	☐	☐	☐
…er utadvendt, sosial	☐	☐	☐	☐	☐
…har en tendens til å finne feil ved andre	☐	☐	☐	☐	☐
…gjør en grundig jobb	☐	☐	☐	☐	☐
…blir lett nervøs	☐	☐	☐	☐	☐
…har en aktiv fantasi	☐	☐	☐	☐	☐
…er hensynsfull og snill mot så og si alle	☐	☐	☐	☐	☐

Laura Lai

Følelser Du Har i Forhold til Jobben Din

Ved å benytte skalaen nedenfor, velg det alternativet som best beskriver hvor ofte, hvis i det hele tatt, du har erfart noen av disse følelsene i forhold til jobben din.

Oppgi hvor ofte du har følt følgende i forhold til jobben:

	Aldri eller nesten aldri	Sporadisk	Nå og da	Regelmessig	Ofte	Svært ofte	Alltid eller nesten alltid

Laura Lai

Preferanser for Segmentering mellom Jobben og Hjemmet

Benytt skalaen nedenfor, og vurder hvor enig du er i hver påstand.

	Svært uenig	Uenig	Litt uenig	Verken enig eller uenig	Litt enig	Enig	Svært enig

Benytt skalaen nedenfor, og vurder hvor enig du er i hver påstand.

	Svært uenig	Uenig	Litt uenig	Verken enig eller uenig	Litt enig	Enig	Svært enig

Laura Lai

Avkobling fra Jobben

Mennesker kan oppleve ulik grad av avkobling fra jobben på fritiden. Benytt skalaen nedenfor, og vurder hvor enig du er i hver påstand.

I løpet av tiden etter jobb…

	Helt uenig	Uenig	Verken enig eller uenig	Enig	Helt enig

Bruk av Teknologiske Kommunikasjonsenheter på Fritiden

Hvor ofte bruker du følgende teknologiske kommunikasjonsenheter til arbeidsrelaterte formål i fritiden?

	Nesten aldri	Av og til	Nøytral	Ofte	Veldig ofte

Når slår du vanligvis av disse teknologiske kommunikasjonsenhetene etter arbeidstid?

- ○ Så snart jeg er ferdig på jobb
- ○ Før klokka 20:00
- ○ Mellom klokka 20:00 og 22:00
- ○ Etter klokka 22:00
- ○ Aldri

INSTRUCTIONS TO CONTRIBUTORS

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To build its International reputation, we are disseminating the publication information through Google Scholar, SemanticScholar, RePEc, IDEAS, J-Gate, Docstoc, Scribd, Slideshare, Bibsonomy and many more. Our International Editors are working on establishing ISI listing and a good impact factor for IJBRM.

The initial efforts helped to shape the editorial policy and to sharpen the focus of the journal. Starting from Volume 13, 2022, IJBRM will appear with more focused issues. Besides normal publications, IJBRM intend to organized special issues on more focused topics. Each special issue will have a designated editor (editors) – either member of the editorial board or another recognized specialist in the respective field.

We are open to contributions, proposals for any topic as well as for editors and reviewers. We understand that it is through the effort of volunteers that CSC Journals continues to grow and flourish.

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