How to increase employees' engagement in organisational citizenship behaviours within continuous improvement programs in manufacturing.

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Summary

This paper offers a new focus for Organisational Citizenship Behavior (OCB) research, based on developing the quality of relationships between supervisors-supervisees and encouragement of discretionary effort (DE) to engage employees in continuous improvement (CI). The contemporary transformations of manufacturing from a traditional industry to trending organisational entities is affected by multi-societal economical and contextual factors. Leading to the departure, from pure "productivism" with stern performance metrics and operational lean approaches to add contextualisation to the human centric perspectives of OCB and DE.

Previous work highlighted supervisor-supervisee relationships as key to developing OCB within the CI context. A model of an alternative operationalization of these core ideas is offered and validated. Data from the manufacturing industry in Thailand provided support for theorizing that most model propositions positively impact on OCBs, engagement in CI programs and encouragement of DE.

Abstract

This paper proposes a new focus for Organisational Citizenship Behaviour (OCB) research through developing the quality of relationships between supervisors and supervisees and the encouragement of discretionary effort (DE) to engage employees in continuous improvement (CI). There is a growing focus on manufacturing as having the potential to generate economic wealth alongside creating high-quality and highly skilled jobs. The contemporary transformations of manufacturing provide the context of this study, where the transforming of a traditional industry to a trending organisational entity affects multi-societal contextual factors. This study helps advance the departure of manufacturing organisations from pure "productivism" with the stern performance metrics and operational lean or agile approaches by adding contextualisation to the human centric perspectives of Organisational Citizenship Behaviour and discretionary effort.

Previous work has highlighted that the relationship between supervisor and supervisee is key in developing OCB within the CI context. This research reports on an alternative operationalisation of OCB based on these core ideas, whilst significantly extending empirical base through testing and validating a proposed model. Principal Component Factor Analysis and Varimax Rotation with Kaiser Normalisation, multiple regression and correlations were used to analyse data collected from the manufacturing industry in Thailand. Data provided support for theorising that most of the model propositions, positively impact to promote OCBs, the engagement in CI programs (CIPs) and the encouragement of DE. These results have important implications for organisational interventions on how to foster OCB in order to enable successful engagement in CIPs. Importantly, highlighting a promising new focus for the OCB literature.

Key words: employee engagement; organisational citizenship behaviour; discretionary efforts; continuous improvement programs

Introduction

Research has widely shown that organisations wishing to remain competitive need to continually examine themselves and seek the incremental improvements that lead to better working practices and cost savings (Jaber et al. 2010; Rummler and Brache 2013), particularly within the manufacturing industry. The contemporary transformations of manufacturing, as articulated by the EU Factory of the Future 2030 vision, provide the context of this study (FoF2020). The morphing of a traditional industry to a trending organizational entity affects such multi-societal contextual factors as: the Factory and nature; green/sustainable; Factory as a good neighbour; close to the worker and the customer; Factory and humans; human centered and factories in the value chain; collaborative practices (FoF2020).

Continuous Improvement (CI) is a function of management-directed action aimed at improving organizational performance and also occurs through employees undertaking tasks that go above and beyond the state of job requirements (i.e. discretionary effort (DE)). Katz (1964) and Bowler et al. (2010), argue that organisations will not succeed solely on the level of performance laid out in job descriptions - Organisational effectiveness is reliant upon the voluntary behaviour of employees to vocalize suggestions for improvement, to help each

other and to safeguard the organization. This requires voluntary commitment and involvement of staff at all levels (Benkhoff, 1997; Sharkie, 2009). However, many organisations find obstacles in engaging employees in CI in the form of disillusioned and obstructive staff who cannot see the value of adding such additional tasks to their job. Thus, engaging staff who have the discretion to give or deny their discretionary efforts at will is a top priority for organisations (Woodruff, 2006); both in terms of retention of their most valuable assets, i.e. 'human capital', and the productivity enhancements linked to the discretionary effort (DE) that engaged employees can bring to the organisation (Devi, 2009).

Bateman and Organ (1983) put forward the term of Organisational Citizenship Behaviour (OCB) to explain the discretionary *"organizationally beneficial behaviours and gestures that can neither be enforced on the basis of formal role obligations nor elicited by contractual guarantee of recompense"*. Later, Organ (1988) and Organ et al. (2006) categorised these organisational behaviours as 'civic virtues', which in turn, limit complaining and motivate acceptance of managerial requests over and above job role duties (in line with Mahdiuon et al. 2010; Zeinabadi, 2010; and Strobel et al. 2013).

Further, Benkhoff (1997) suggested that the DE integral element of OCB emanates from personal characteristics that motivate individuals; the desire not to be seen by others as sub-standard and the potential to develop and sustain relationships that promise rewards. Varkey et al. (2008) classified five drivers of DE, i.e. the desire to improve; cooperation and teamwork; problem solving; accountability; and respect. Devi (2009) also identified teamwork, considerate treatment and training as significant drivers.

This paper builds on an alternative operationalisation of OCB with a focus on supervisees offering DE to engage in CI through the relationships between the supervisor and supervisee. The DE that managers consider so valuable to engage employees in continuous improvement initiatives leading to OCB is contingent not only on the individuals' desire to offer it, but also on the perception of discretion, by both the individual and leader. For example, when roles are loosely defined, it is likely that OCB will be considered as in-role, making employees more likely to engage in these behaviors (Wanxian and Weiwu, 2007; Kwantes, 2008). However, supervisors and team members often have difficulty discerning whether behaviors are in-role or extra-role (Bolino, 2004). Klieman et al. (2000) describe this as the subjective perception by the employee of their reciprocal agreement with the organisation (known as the psychological contract). Job descriptions and cues from others help individuals to know what is considered in-role and extra-role (Klieman et al. 2000). Thus it appears plausible to assume

that where involvement in DE is an individual's choice, staff members' relationships with their supervisors and their desire to improve could have significant impact on their decisions to offer DE and thence OCB.

In the current turbulent economic climate, many organisations face large-scale restructuring change to develop and adapt by often integrating previously competitive teams under new leaders. Thus, the need for a diagnostic/intervention tool to facilitate engagement in continuous organisational improvement and to assist with problem solving at the level of supervisory and team management has become prominent in organisational strategy. To understand employee engagement in continuous improvement (CI), i.e. "the extent to which employees feel passionate about their jobs, are committed to the organisation, and put discretionary effort into their work" (CustomInsight 2013), its components and the issues that affect it, requires that the ability to encourage it in team members is comprehended. This is vital to creating a successful and ongoing culture for continual improvement, whereby organisations implicitly and/or explicitly confirm to staff that their extra efforts are valued.

In the extensive and ever-increasing body of work specifically related to OCB, the primary antecedents are recognised as leadership style (Zeinabadi, 2010; Rubin, 2010; Bettencourt, 2004) fairness (Organ, 1990); support (Oghuz, 2010); organisational commitment (Organ, 1990; Zeinabadi, 2010), job satisfaction (Organ, 1994) and being part of a team (van Dick et al. 2008). Each of these categorisations shed light on potential constructs that could impact on the ability of a supervisor to encourage their team members to freely engage within CI and offer OCBs.

Literature offers a plethora of potential solutions, constructs and tools to those seeking help, which makes it very challenging and overwhelming for practitioners and researchers alike. Wagner et al. (2009; 2011) extensively reviewed the existing literature and related tools and highlighted the need to negotiate a meaningful way through the proposed solutions and ascertain what constructs prove most useful to facilitating increased discretionary effort and engagement into continuous organisational improvement. They identified five main constructs and interdependent factors that contribute highly to increased discretionary effort and OCBs within continuous improvement programs; namely: empowerment (motivation, trust); creativity; Leadership style (situational leadership); personality type (evinced through preferred team roles; and Leader-Member Exchange (evinced through Leader-subordinate relationships). This evolved into a theoretical model and bespoke tool to be used by

researchers and practitioners to facilitate engagement in continuous organisational development not yet tested empirically.

The current study aims to develop and empirically test the Wagner et al. (2011) tool propositions within the manufacturing industry in Thailand. The timing and focus of the research is highly fortuitous given the European manufacturing vision and drive for Factory of Future 2020 (FoF2020) where the need to enhance engagement in manufacturing jobs has been highlighted.

Brief Synopsis of the Theoretical Background and Model Development

The examination of the extant literature on leadership related to continuous improvement identified five major themes and interdependent factors (i.e. empowerment/motivation/trust, creativity, leadership styles, leader member exchanges and team roles) pivotal to improve organisational relationships and engagement in continuous improvement. The analysis of the associated empirical tools led to the development of the 'Facilitating, Advancement of Continuous Improvement through Enabling Tools (FACETS) questionnaire for use as a bespoke tool to improve supervisor-supervisee relationships and facilitate engagement in CI. The design integrated theoretically relevant parts of proven valid and reliable tools into a single survey tool (i.e. Job Diagnostic Survey (JDS) and Motivation Potential Score (MPS) by Hackman and Oldham, 1980; The Leader Member Exchange questionnaire (LMX-7) by Graen and Uhl-Bien, 1987, 1991, 1995; the Belbin team roles Self-Perception Inventory (SPI), 1981, 1993, 2010; the KEYS to Creativity by Amabile et al. 1988, 1996 and 1997; and the Hersey and Blanchard leadership model and framework, 1969, 1977, 1988, 1996, 2009).

This tool was developed during a two-year period. On one hand, focusing specifically on the aspects that link directly to engagement in the CI of the selected tool; on the other, reviewing the existing questions in the light of the factors that research found as affecting it and bringing the factors together. This dynamic process of aligning the above theoretical criteria with real-life manufacturing environments enabled new questions to be written that have the potential to appropriately measure the constructs of interest without plagiarizing the work of the extant tool developers. Subsequently, a new concise tool was created measuring only aspects considered to directly influence the behaviour of interest for analysis, i.e. employee discretionary engagement in continuous improvement. The initial combination of previous questionnaires' items comprised 237 questions and the final tool is 99 (see Wagner et al. 2011).

After a pre-pilot with university staff and students, the tool was piloted in Slovenia with a qualitative design within a subsidiary company of a global automotive equipment manufacturing organization. Results were used to change supervisory working patterns, with the adoption of regular improvement meetings; relationships to supervisees; and reward systems. As part of a global initiative, this company had undertaken steps to implement a lean managerial structure and create a long-term strategy for continuous improvement. The strategy worked on the premise that the role of all staff on the shop-floor was to develop ideas that would improve their immediate working area, or production system, and could be actioned by supervisors or maintenance staff.

Retesting one year later showed that supervisor-team member relationships had improved, having a positive impact in the CI program. Very importantly, the theoretical model generated propositions that offer insight on how to develop relationships that motivate staff to voluntarily contribute organisational citizenship behaviours to CI programs and which are developed and empirically tested with this paper.

Figure 1 provides a model of constructs and themes established that affect the potential for individual employees and for teams to engage and contribute in OCB by offering DE.

INSERT FIGURE 1 ABOUT HERE

Hypotheses Development

These main constructs and linkages with subsidiary themes that comprise the model in Figure 1 are briefly examined and situated in the theoretical context, followed by the development and articulation of the hypotheses to test.

Empowerment, motivation, trust and Leader/subordinate relationship

Human Capital theory has recognized that, as employees become more valued as assets, empowering them is a primary part of any strategy for organisational effectiveness (Serenely et al. 2007; Conger and Kananga, 1988; Keller and Dansereau, 1995; McEwan and Sackett, 1998). Several definitions for empowerment exist in the literature. Conger and Kanungo (1988) offer their interpretation as *"a process of enhancing feelings of self-efficacy among organizational members"*, which is achieved through identifying and then removing issues that lead employees to feel powerless, recognising the meaning of empower as being to enable rather than to delegate. Wang and Lee (2009) and Swanson (1997) see empowerment more as having the resources, information and authority to complete a task, and the ability to

monitor and modify processes and procedures. For many, empowerment is intrinsically linked with the transference or sharing of power from those in a senior position to subordinates (Greasley et al. 2005; Conger and Kanungo, 1988). Evident problems with the concept of power transference are: a) the resistance it can incite in those who feel they are losing it; and b) the reluctance of disempowered employees who fear the added responsibility and accountability that empowerment brings (Greasley et al. 2005). Lee and Koh (2001) suggested that empowerment has two components; the psychological state of the subordinate, and the attitudes and behaviours this leads to (Dewettinck and Van Ameijde, 2011), together with the influencing empowerment behaviour of the leader (Lee and Koh, 2001; Dewettinck and Van Ameijde, 2011).

Studies have shown that empowerment is also dependent upon establishing a level of trust between the leader and subordinate (Dainty et al. 2002; Greasley et al. 2005; Mishra and Spreitzer, 1998; Robbins et al, 2002; Richards, 1995), which is enhanced by a belief in the leader's competence, reliability and dependability (Ergeneli et al. 2007). Having such trust leads to greater freedom for workers, allowing them more flexibility, the ability to begin to make their own decisions (Greasley et al. 2005) and to feel that they can genuinely contribute to plans and decisions within the organisation (Dainty et al. 2002). Benefits of empowerment have been observed as increased engagement (Albrecht and Andreetta, 2011); job satisfaction (Dewettinck and Van Ameijde, 2011); enthusiasm (Ergeneli et al. 2007); motivation, organisational loyalty (Greasley et al. 2005) and commitment (Dewettinck and Van Ameijde, 2011; Albrecht and Andreetta, 2011; Kuo et al. 2010); and lowered dysfunctional resistance (Vecchio et al. 2010), as well as increased skills and innovative capabilities (Dainty et al. 2002).

Feeling empowered also links into the construct of motivation, as tasks are seen as valued and motivation to take part leads to empowerment (Thomas and Velthouse, 1990). Wang and Lee (2009) further related the concept of empowerment to the Job Characteristics Model (JCM) of Hackman and Oldham (1980), which looks at motivation and job satisfaction. The JCM components of autonomy (Yang and Choi, 2009), significance (Katsikea et al, 2011), variety and feedback have also been directly linked to OCB outcomes (Organ, 1990). We therefore propose:

Hypothesis 1: Individualized relationships displaying significant trust will directly increase empowerment and job satisfaction within the members of a team leading to OCB.

Empowerment, Leader/subordinate relationship and Leadership style

The relationship that develops between the supervisor and team members is a special one. It affects the climate in the team, creating a collective identity that influences the quality and performance of its output (Chang and Johnson, 2010). It can impact on the task expectations (Klieman et al. 2000; Tierney, 1999) and responsibilities of members (Klieman et al. 2000).While all relationships mature over time (Atwater and Carmelli, 2009), it is essential that the supervisor is able to persuade team members of their skills and capabilities from the beginning, as this influences team members' evaluation of their supervisor (Ballinger et al. 2009): the more positive their approach (Tierney, 1999) and the more receptive to suggestions that they are, improves the potential for team members to reflect the same values (Atwater and Carmelli, 2009).

Leader-Member Exchange Theory (LMX), with its origins in Social Exchange Theory (Harris et al. 2009; Cropanzano and Mitchell, 2005), is founded on the notion of a two-way, dyadic relationship between an individual subordinate and their leader (Northouse, 2007; Tierney, 1999; Kim and George, 2005), which has a clear link to OCB (Kim, 2010). For each dyad, the perceptions of both the leader and subordinate affect the measure of the multidimensional relationship (Scandura and Pellegrini, 2008) making it essential to view the relationship objectively from both sides (Nahrgang et al. 2009); Zhou and Schriesheim (2010) acknowledge that supervisors value the task-oriented dimension most highly, while subordinates are likely to put more emphasis on the social aspects of the relationship

The quality of relationships are termed high or low LMX (Northouse, 2007), each displaying different characteristics and consequences that will have an effect on the organisation (Harris et al. 2009). Employees that develop high LMX relationships with their leader display loyalty (Scandura and Pellegrini, 2008), increased organisational commitment (Northouse, 2007; Cogliser et al. 2009; Mazibuko and Boshoff, 2003; Abu Bakar et al. 2010), and are likely to stay (Vecchio, 2005); a highly influential factor for newcomers to the organization (Chen and Eldridge, 2011). This relationship also leads employees to engage in OCBs based on the desire to support both their leader and the organisation (Sharkie 2009; Ilies, 2007). Personal benefits include increased job satisfaction (Vecchio, 2005), support (Tierney, 1999; Harris et al. 2009) and respect (Scandura and Pellegrini, 2008) from their leader, along with rewards (Harris et al. 2009) and other benefits (Atwater and Carmelli, 2009).

Building a relationship is dependent on the development of trust and the perception of fairness, which is crucial to establishing this trust (McLain and Hackman, 1999) and often

leads the way to the engagement that is essential for DE (Sharkie, 2009). When individuals begin to experience the rewards of a high-level relationship they begin to reciprocate in discretionary forms (Klieman et al. 2000) increasing commitment (Cogliser et al. 2009) as they perceive their potential to make a difference increases (Eisenberger et al. 2002).

Observation and feedback on tasks can allow team members to assess their performance and their supervisor's perception of them; however, excessive monitoring could lead to undesirable behavior (Klieman et al. 2000). It is important, therefore, that the perceptions of the supervisor and the team member are balanced as this establishes reciprocal behaviours, especially when both perceive the relationship as high, as LMX has been shown to be a significant antecedent of OCB in all levels of employee (Bettencourt, 2004, Chang and Johnson, 2010).

Like LMX, Situational Leadership Theory (SLT) (Hersey and Blanchard, 1977) involves a relationship between the team leader/supervisor and their team member, but it deals primarily with finding the leadership style that is most appropriate for a person in a particular situation. SLT recognises that determination of leadership behaviour originates from the subordinate (Graeff, 1983); leadership is not something that is *'done to'* subordinates but something that should be *'done with'* them (Hersey and Blanchard, 1996; Blanchard et al. 2004). The key to SLT comes from behaving consistently, but not necessarily in the same way with all individuals (Blanchard et al. 2004; Blanchard and Johnson, 2003). SLT recognises that some people need a lot of support and direction, while others can work with a minimum of interaction with their leader.

However, it is not just the individual that dictates the leadership style; it is also possible that the same person can require a different level of support when undertaking a task or role in which they have less or more experience (Sims Jr. et al. 2009). Thus, Hersey and Blanchard created a model that shows how the behaviour of the leader should change, based on the competence and confidence of the individual (Hersey, 2009). The model depicts leadership style moving along a path from directing to coaching, for those with little experience of the role; progressing to a supporting style; and ending at the ideal delegating style, where the individual is motivated and able to work autonomously (Blanchard, 2008). It is the responsibility of the leader to make an accurate assessment (Blanchard and Johnson, 2003) of where an individual falls on the path in order to determine the leadership style that is right for the situation (Johansen, 1990), continually reassessing as progress is made. It is important, however, that this is done with the employee so that an agreement can be made on

the level of leadership they need (Blanchard et al. 2004). A successful outcome depends on the combination of leader behaviour and follower development level (Thompson and Vecchio, 2009).

Fundamental to SLT and the OCBs that can be displayed as a result is the fair treatment of team members, as these behaviours are often a direct result of the perception of fairness in the way they have been treated (Organ, 1994). Leading in this way looks to build trust and a sense of ownership and responsibility in employees (Blanchard and Johnson, 2003). This can only be achieved, however, by ensuring that a leader's actions meet the needs and fulfils the perceptions they wish the team to gain (Blanchard et al. 2004). It is important to work with individuals to increase their self-esteem, suggesting that workers who feel good about themselves are more productive (Blanchard and Johnson, 2003). This is often achieved by providing constructive feedback, which allows an individual to know how well they are performing and also to recognise areas for improvement and further training. However, it is also essential that the leadership and feedback relates directly to the task being performed, delivered in a non-personal manner and unaffected by other people or what is taking place elsewhere in the organization (Blanchard and Johnson, 2003).

As SLT transitions take place, employees develop ownership and responsibility, and build trust with their leaders, as they are recognized as *'appreciating assets'* (Blanchard, 2009). Sims et al. (2009) found that empowerment also moved in stages and often depended on the criticality of the project and its due date, and was intrinsically linked to the experience of the workers. Malone (1997) also recognized that, similar to situational leadership, as employees begin to take on more responsibilities, leaders become more like coaches rather than decision makers, as they observe and empower their team to fulfil these new roles. We therefore propose:

Hypothesis 2: As individual team members move through the situational leadership styles their ability, confidence, level of empowerment and engagement rises.

Empowerment and Team member relations

Hypotheses one and two adopt a theoretical lens focusing on the employee/supervisor (leader) relationship. Hypothesis three now adopts the perspective of an individual working in teams. Individualizing a relationship based on experience and competence has the potential to improve leadership. However, each person is not just a composite of their work-based characteristics, but is also driven by personality and personal characteristics such as gender, age, background, values and ethics (Kwantes, 2008). Developing an understanding of these

personal characteristics will enhance the leader-subordinate relationship, and have the potential to influence OCB (Mahdiuon, 2010). Extant research has shown that there is a significant link between OCB and personality, with agreeableness, conscientiousness; and, correlating most closely openness (Mahdiuon, 2010; Organ, 1994; Kwantes, 2008)

Several authors have gone deeper into the effects that an individual's personality has on their behaviour in a team-based work environment. Previously, people would be selected for teams by job function, although this approach does not automatically create effective team working (Senior, 1997), nor does it give the benefits of increased creativity, participation and commitment it is recognized to offer (Partington and Harris, 1995). Henry and Stevens (1999) concluded that team effectiveness could result in greater satisfaction, participation and willingness to collaborate, while Holztman and Anderberg (2011) added factors of increased quality and innovation. McCrimmon (1995) identified the need for members to propose ideas, critically evaluate and then implement them, all the while sustaining team harmony. This suggests that members need to behave as a team instead of as individuals (Sommerville and Dalziel, 1998). For this to take place, however, a team needs to contain different core characteristics (Holztman and Anderberg, 2011), each performing a role that fits their own personal characteristics (Davies and Kanaki, 2006). Team roles are defined by a specific pattern or style of behaviour made up of personality, mental ability, values and motivations, experience, field constraints and role learning (van de Water et al. 2008; Belbin, 1993); but it is the synergy of these complementary styles that builds truly effective teams (Sommerville and Dalziel, 1998).

The makeup of a successful team has been investigated widely in management literature for several decades, with team roles studied as far back as 1948 (Benne and Sheats, 1948; cited in Adair, 1986). Their initial idea was followed up by further studies, leading variously to the identification of nine (Margerison and McCann, 1990), ten (Spencer and Pruss, 1992), twelve (Woodcock, 1989) and even fifteen different team roles (Davis et al. 1992). Probably the most well-known theory and that preferred by many organisations is the Belbin Team Roles Model (1981). Developed over a nine year study of personality types and behaviours, Belbin's theory proposes that combining all roles offers the greatest potential to work effectively (Broucek and Randell, 1996). Belbin (1981) developed a classification of the roles each individual could exhibit in a team environment, detailing skills and behaviours each can offer the team dynamic. Since its publication, some researchers have expressed doubt over the model's academic validity (e.g. Fisher et al. 2002), while many others support the model,

suggesting it has made a significant contribution to understanding (Fisher et al. 1996); recognizing its value in use to be more important than its psychometric validity (Partington and Harris, 1995) and acknowledging that to discard the work due to uncertainty would be a great pity (Fisher et al. 1996).

Balderson and Broderick (1996) discovered that identifying a person's natural team role facilitated an understanding of how they were able to contribute to the team. Fischer *et al.*, (2002) recognised that it was the reciprocal understanding from applying the model both, at managerial and managed levels of the organization that lead to greatest contribution potential. Revised from his original eight, Belbin's nine roles now comprise: the determined leader roles of Coordinator (who manages) and Shaper (who motivates the team into action); the thinker roles of Monitor-Evaluator (who critically analyses viability) and Plant (who initiates creative ideas); the company workers of Implementer (who carries out the work) and Completer-Finisher (who works methodically to completion); the negotiator roles of Resource Investigator (who networks with outsiders) and Team Worker (who keeps harmony in the team); and finally the provider of task expertise, the Specialist (McCrimmon, 1995; van de Water et al. 2008; Pritchard and Stanton, 1999).

Koberg et al. (1999) further recognized that many personal factors affect empowerment, both on the part of the leader and the subordinate (Ergeneli et al. 2007). Such factors include *"age, gender, ethnicity, self-concept, self-esteem, self-efficacy, motivational needs, profession and cultural background"* (Koberg et al. 1999); with those that come from the leader identified as approachability and influence, plus dependability and integrity (Sharkie, 2009). Further studies have examined other factors that individualize workers, such as education. Hancer and George (2003) investigated the effects of level of education on empowerment and, contrary to the findings of earlier work, showed that those with a lower level of education had higher scores in the measurement of empowerment and meaning. Ergeneli (2007) and Koberg et al. (1997) also reported that status and position within in an organisation has a significant effect on empowerment, with those considering themselves to be of a higher status feeling more empowered, thereby linking in to the power ascribed to the roles they hold. This leads to our next proposition:

Hypothesis 3: Personal factors (i.e. age, gender, level of education, length of tenure, type of job role and time in current team) and personality characteristics (i.e. team roles) affect the potential level of empowerment in individual team members.

Empowerment, Trust, Leadership style and Creativity

Creativity has been suggested to emerge from the problem solving activities of individuals on work that has no easy solution, forcing them to progressively modify their initial ideas to find a solution Weisberg (1986). Furnham and Bachtiar (2008) identified that most authors suggest potential creativity in an individual would be linked to cognitive ability and style, such as the ability to think quickly. Pirola-Merlo and Mann (2004) identified two relevant creativity models: 1) the Componential Model of Organisational Innovation, put forward by Amabile (1997), which brings together other ideas to recognize the importance of domain relevant knowledge, creativity relevant skills and motivation, and 2) Ford's (1996) Theory of Creative Individual Action, which identifies knowledge, ability and motivation within the work environment and sense making.

Continuous improvement itself relies on the generation of incremental ideas and, as a result, is intrinsically linked to the concept of creativity (Oke, 2007; Perel, 2002; Morton and Burns, 2008; Hewett, 2005; Amabile et al. 1996). Amabile et al. (1996) described creativity as *'the seed of all innovation'* but warned that an individual's perception of the innovation process will impact on their personal motivation to contribute ideas. There are also, however, barriers to, or requirements for, a culture of creativity. One barrier is the level of involvement that people feel with the work task and the understanding they have of its importance (Oke, 2007; Gruber, 1989; Csikszentmihalyi and Sawyer, 1995). Hewett (2005) found that creativity could only be fostered in an environment where external conditions do not disrupt or compete with the desire for creative ideas; it is only likely to exist in a culture where people feel safe (Kofoed et al. 2002), where failure is not punished, but rather seen as part of the learning experience (Perel, 2002). It was also found that rigid management structures impacted negatively on the potential for creative innovation (Amabile et al. 1996), while those showing high levels of support offer greater knowledge creation and transfer (Kratzer et al. 2005; Zarraga and Bonache, 2005). It is important that an individual feel they have a level of control over their working environment (Csikszentmihalyi, 1996). Recommendations for enhancing personal creativity include the idea that an individual should identify where their talents lie and make efforts to practise to improve, to open one's mind and consider the world anew, and to be prepared to take risks (Shekerjian, 1990). Moreover, if employees are to be truly motivated to innovate, the assessment of ideas must be seen to be fair with successful innovations publicly rewarded in a way that is valued by the individual and is in line with the benefits attained by the organisation (Perel, 2002).

Sims et al. (2009) found that, if a leader wishes to develop creativity in their team members, an empowering type of leadership is recommended. Yang and Choi (2009), go further by considering creativity as a dimension of empowerment that has a significant effect on team performance. Empowered employees experience greater autonomy. This leads them to positively interpret events as opportunities and links to creativity (King and Gurland, 2007). Conger and Kanungo (1988) put forward the idea that empowerment was important for stimulating and managing innovation in organisations, and recognised that creativity remains even in times of disruption.

Sharkie (2005) investigated how an individual's perception of the organisation in which they work affects their willingness to share ideas and knowledge. He developed a model showing that trust is the primary concept needed to develop a culture of sharing ideas and innovation. Comprising the six components of security, employability, management, fairness, supportiveness and rewards (Sharkie, 2005; (Reychav and Sharkie 2010)), these elements mirror those required for creativity, thus establishing a link between the two constructs. This leads to our next proposition:

Hypothesis 4: Creating a relationship based on trust will aid a leader in empowering individuals to fulfil their creative potential in the team and organization.

Both Hersey (2009) and Blanchard (2008), the original creators of the situational leadership model, acknowledged the need to individualize the relationship between the leader and subordinate, basing their actions primarily on the situation, but also recognising the needs of the worker and adapting their behaviour in line with this. This leads to proposition 5:

Hypothesis 5: Knowledge of an individual team member's skills, abilities and confidence levels will allow the leader to lead and empower their subordinates more effectively.

Dyadic leadership relationships are affected by the characteristics of the individuals on both sides of the relationship; equally by the personality of both the leader and subordinate (Sogruno, 1998). Thus, Asendorpf and Wilpers (1998) stated that it is important to examine the personal factors involved for both the leader and subordinate (Nahrgang et al. 2009). According to Belbin's theoretical framework that was based on Cattell's Personality Inventory, the 16PF (Cattell 1946), personality characteristics lead to specific team role preferences and what contributions they make in the workplace (Belbin 2006). It is also the case that when a more social aspect develops in the relationship between the leader and team member OCBs are more likely to occur (Rubin, 2010). Thus, we also propose:

Hypothesis 6: Knowledge of an individual team member's personality, interests and working preferences will allow a leader to lead and empower their members more effectively.

Elkins and Keller (2003) recognized that the high quality exchanges characteristic of high LMX relationships between a leader and subordinate are important for creativity. High LMX leads to feelings of energy, which has led to greater involvement in creative work (Atwater and Carmeli, 2009) and has a positive effect on less creative individuals (Tierney, 1999). Amabile's Componential Theory of Creativity (1988; cited in Atwater and Carmeli, 2009) showed that, through their supportive behaviours, leaders have a direct influence on the creativity of their team members. Sharkie (2009) linked this to the individuals' perceptions of the support being given, which influences ownership and competence and leads to more motivated and involved teams. Atwater and Carmeli (2009) found that the benefits of a high LMX relationship are essential for workers to become involved in creative work; this was further substantiated by Carmeli and Spreitzer (2009), who showed that *"connectivity mediates the relationship between trust and thriving, and thriving mediates the relationship between connectivity and innovative behaviours"*. Thus, we propose:

Hypothesis 7: A supportive relationship with high quality exchanges leads to greater discretionary involvement in creative activities or CI programs

Although no formalized link has been found between situational leadership and personal factors related to the individual, it is proposed that one exists. The stages within situational leadership that progress from *'directing'* to *'coaching'* and *'supporting'* to *'delegating'* are structured with the situation and an assessment of skills and competence in mind. However, these do not take account of an individual's personal factors or the social dynamics in the workplace. For instance, in its early stages SLT calls for the leader to direct, but some individuals may find this intimidating and may feel they are not forming a relationship with their leader; requiring the support and encouragement in this stage that only comes in later stages. We therefore propose:

Hypothesis 8: Knowledge of individual team member's preferred team role(s) and preferred leadership style will allow situational leadership to be applied appropriately and effectively.

A link between situational leadership and creativity has yet to be established. It is again proposed that a link between the two constructs exists. By applying the correct style of leadership at the appropriate stage of development, one that is negotiated between the leader

and team member should lead to a good working relationship, which in itself has been shown to facilitate creativity (Atwater and Carmeli, 2009). It is also thought that providing the right level of support, direction, coaching or delegation, will allow the individual to thrive, in any task they become involved in, which would include creative pursuits. We further propose:

Hypothesis 9: Applying the apposite situational leadership style will facilitate creative activities in team members.

Furnham and Bachtiar (2008) identified that within extant literature a consensus was emerging whereby creativity is linked to personality factors (e.g. Feist, 1998), as well as motivation and cognitive style. Csikszentmihalyi (1997) cited personal prerequisites for creativity, which include curiosity, patience and a willingness to take risks. Characteristics such as openness to new experience, extraversion and low neuroticism were found to be congruent with creative individuals (Furnham and Bachtiar, 2008). Working with the 'Big Five' personality traits, Feist (1998) found that extraversion, openness and neuroticism were positively related to creativity, whereas agreeableness and conscientiousness were negatively related. The 'Big Five' conceptualization derives from the 16 PF personality model by Cattell (1946) that Belbin (2006) based his research on to establish that personality characteristics lead to specific team roles, corroborated by other research (c.f. Dulewicz 1995; Fisher et al. 2002).

Teamwork has been seen to contribute to creativity in the workplace, but particular care must be taken with the mix of people who make up the team (Partington and Harris, 1995). Belbin's assessment of team roles feeds into this idea. An ideal team requires more than just the Plant, the role characterized by Belbin as the creative one (Belbin Associates, 2010), but a mix of the other roles that support creativity and facilitate the taking through of ideas into real solutions. The Plant role is embedded into a team to improve creativity and inspire other team members (Titterington, 2010). However, Augsdorfer (2008) found only 5-10% of people working in research and development can be considered to be truly creative, in what would usually be considered as a creative role. This highlights an even greater need to recognize the contribution that the other team roles have in the creative process, and to give them a chance to flourish and contribute both creatively and supportively in the team environment (Augsdorfer, 2008). Thus, our final proposition is as follows:

Hypothesis 10: Recognizing individual's team role preferences and the contribution they can make will lead to more successful creative CI outcomes within a team.

The proposed research framework to test the identified theoretical constructs above is illustrated in Figure 2 below:

INSERT FIGURE 2 ABOUT HERE

Methods

Design, procedure and participants

A longitudinal case study methodology approach (Yin 2009) was used in this study within a manufacturing company from the automotive industry in Thailand. It utilizes the previously developed bespoke survey tool (Wagner *et. al.,* 2009-2011) that was piloted in Slovenia within the same industry. Internal assessments from the managerial and human resources teams ascertained that relationships between staff members were very poor, staff were disengaged and overall plant functioning needed improvement. Based on the previous pilot intervention results, it was expected that, through the use of this tool, insight and guidance to the management team on how to improve relationships and create a participatory and successful CI program would be derived. That is, a program whereby staff are motivated to voluntarily contribute and to seek out innovation and development opportunities, thus validating the usefulness of this tool cross culturally.

The research engagement started with extended visits, semi-structured interviews and observations at the Thailand plant, facilitated by professional interpreters, external to the organization. The themes discussed concurred with the survey organizational issues being measured and also focused on tool feedback.

A total of 87 employees participated: (N=73) members of shop floor teams and (N=14) supervisors; 69 male and 18 female; aged 25-to-45 years; the majority (60%) educated to high school level, followed by Technical College level (35%) and degree level (5%); length of tenure ranged from less than one year (36%) to 4-7 years (23%), with (31%) at 1- and (10%) 2-4 years. The majority had been in their present teams for less than 2 years (84%) and the remaining (16%) for 2-7 years. (81%) of the participants were from the manufacturing plant (11%) from the quality inspection and (7%) from the assembly line.

Participants were assured anonymity and confidentiality of the results. The survey was administered to all staff with a 100% response rate.

Analysis

The questionnaire had six main sections containing a number of relevant items to each section theme. All items utilised a 5 point scale ('Not At All', 'A Little', 'Moderately', 'Quite A Bit' and 'A Great Deal'). The resulting reliability measures (Cronbach alpha) for the six themes are shown in the table below.

INSERT TABLE 1 ABOUT HERE

The reliability measures are all encouraging and above the recommended value of 0.7. The lowest value is for 'Employee Engagement' and even this is only marginally below 0.8. These results indicate that the items within each section are measuring information cohesively. It should be noted that, since the Cronbach alpha measure will tend to increase in line with the number of items measuring each construct, high values of Cronbach alpha might be expected for this study, where the minimum number of items per construct is 12 (Hair et al. 2010) .

Descriptive and frequency based statistics were carried out to observe whether questions, scales, answers, means and standard deviations made sense in relation to the data and what we wanted to observe. Pictures were next drawn of the relationships that we wanted to measure (the hypotheses) and, due to sample size and the results of Cronbach alpha, two main analytical methods to look at association between the variables were chosen: factor analysis and Pearson correlations. Hypothesis 3 was further investigated by carrying out a multiple regression analysis.

To ensure construct validity of the survey instrument, all questionnaire items were submitted to factor analysis to ascertain whether the questions measured what they purported to measure (i.e. to group variables correlated with each other because of some common linkage: factor, theme and latent variable). That is, to observe whether the items are grouped together in factors according to the theoretical themes identified from the literature review (Stevens, 1996). The final factors were then discussed between researchers and agreed upon.

Since one of the aims of this paper is to further develop and beta-test the survey instrument this was followed by analysis of the data according to each hypothesis, i.e. the variables pertaining to the themes of interest were factor analysed again, in order to identify the individual sub themes to measure within each proposition (e.g. trust, organizational citizenship behaviour). This enabled the identification of which questions to combine into a summated score, i.e. into a single number that could be used for correlation. Based on staff

scores (means of the various items) we could work out the correlations for each of the proposition links to see whether the concepts (e.g. empowerment and proposition 3) link together. At times, however, summated scores were not deemed suitable because the propositions aimed to identify different aspects and it was considered necessary to correlate all the items ascertained from the factor analysis (e.g. see hypothesis 8).

Measures operationalization and results by propositions

Hypothesis 1 proposed that individualized relationships displaying significant trust (and high quality exchange) would be positively related to team member empowerment and job satisfaction leading to OCB. To examine the dimensionality of the measures (i.e. high quality exchanges; trust; organizational citizenship behaviour; empowerment; and job satisfaction) a confirmatory factor analysis was conducted on the variables representing the theoretical themes. The factors were then combined into summated scores and used to work out correlations for each of the propositions' predicted links. In line with Dewettinck and Van Ameijde (2011), job satisfaction has been used as a proxy to measure empowerment; hence, by using both measures, links between job satisfaction and empowerment may be corroborated by the data.

A significant positive correlation was found at the $p < .01$ level (2-tailed) between High Quality Exchanges and Empowerment (.508) Trust and Empowerment (.478); and Empowerment and OCB (.829). That is, we can be 99% certain that individualized relationships characterized by high quality exchanges and displaying significant trust directly increase empowerment and job satisfaction leading to OCB. Therefore, Hypothesis 1 was supported.

When further questionnaire items measuring Job Satisfaction were submitted to factor analysis and then transformed into a summated score, these also revealed a significant association between High Quality Exchange and Job Satisfaction (.417) at $p < .01$ (2-tailed); thus, corroborating the same relationship as with Empowerment and High Quality Exchanges relationships and strengthening the results.

The variables to measure leadership styles for Hypothesis 2 were based on Hersey and Blanchard's (1969) four styles of directing, coaching, participating/supporting and delegating. Although four factors emerged from the factor analysis, not all items were congruent with the Hersey model. This model suggests a profile of characteristics (i.e. behaviours that contribute to the styles). Thus, for the effect of analysis only the items agreed by the research team that fitted in with the theoretical model were used. These were weighted

and averaged (or summated if multi-items) according to each of the 4 leadership types. For example, when the manager utilizes the directive style, item 3 (i.e. 'my leader directs how I undertake tasks') would score high and items 12, 6, 10 and 2 ('my leader provides me with sufficient feedback on how well I'm doing'; 'my leader discusses with me how we will work together'; 'I'm free to make my own decisions'; and 'my leader supports me in my tasks', respectively) would score low and thus be reverse coded. This procedure was used to code all different leadership styles. Items for the ability, confidence, empowerment and engagement constructs were also identified, factor analysed and transformed into summated scores to look for associations between the different variables. First, 'leadership styles' and 'ability' and 'confidence' were correlated, followed by 'leadership styles' and 'ability' and 'confidence' with 'empowerment'.

Only the leadership styles of Coaching and Delegating were found to be associated with Ability (.493 and -.493, respectively) at the $p < .01$ (2-tailed) level of significance. No correlation was found between leadership styles and Confidence. Significant correlations for Empowerment was found at the $p < .01$ level with the leadership style of Coaching (.425), whilst a significant negative relationship was found with both Delegating (-.425) and Directing (-.421). No significant association was found between Empowerment and the Supporting leadership style.

Significant positive correlations were also found for Empowerment with Ability (.506) and with Confidence (.520) at the $p < .01$ (2-tailed) level of significance. Links between Engagement and leadership style were all significant and found to be positively correlated for Engagement with Coaching (.533) and for Engagement with Supporting (.358), while as expected (see Sims et al. 2009) a significant negative correlation was found for Engagement with Directing (-.526) and with Delegating (-.533). Results of the correlations of Ability with Engagement, and Empowerment with Engagement showed 99% significance (.325 and .496, respectively), while Confidence with Engagement showed significance at the $p < .05$ level (.264); i.e. with 95% certainty. Therefore, Hypothesis 2 is partially supported.

Hypothesis 3 predicted that the personal factors of an individual, i.e. their demographic background and personality characteristics evinced by team roles, will affect their potential level of empowerment. Demographics were identified and used as the variables to operationalize the model's *personal factors*, i.e. 'Age', 'Gender', 'Level of education', 'Length of tenure', 'Type of job role', and 'Time in current team'. The characteristics of items representing the eight different Belbin (1981) team roles were also identified and

operationalized as the variables to see if questions linked together. 1 factor per team role was confirmed by the research team and items translated in summative scores for each type, then correlated individually with empowerment to measure for any associations - whether the concepts link together as expected. Third, the team role types identified were correlated with empowerment. No significant correlations were found between the demographics examined i.e. Length of tenure; Level of education; Job role; Age group; Gender and Length of time in Team and Empowerment. To further confirm or challenge these results, the multiple regression analysis in Table 2.1 was carried out, which confirmed that, except for Gender (possibly due to the male predominance; 69 Males and only 18 females) personal factors overall appear not to affect the level of Empowerment.

INSERT TABLE 2.1 ABOUT HERE

INSERT TABLE 2.2 ABOUT HERE

INSERT TABLE 2.3 ABOUT HERE

All team roles correlate positively with Empowerment at the $p < .01$ level of significance. Unsurprisingly, Coordinator has the greatest correlation with Empowerment (.554), followed by Teamworker (.460) and Monitor-evaluator (.435). Thus results support the proposition that Team roles will affect team members' potential level of Empowerment and clarified that the personal demographics except for gender are not correlated with empowerment. Hypothesis 3 is thus partially supported.

Hypothesis 4 proposed that a relationship based on trust will help leaders empower individuals to fulfil their creative potential in the team and organization. The variables to measure relationships based on Trust, Empowerment and Creative potential were factor analysed. A significant positive correlation was found linking Creative potential with Empowerment (.480) and trust with empowerment (.478) at $p < .01$ (two-tailed). A positive significant association was also found linking Trust with Creative Potential (.380). Thus Hypothesis 4 is supported.

Hypothesis 5 proposed that knowledge of individual team members' Skills, Abilities and Confidence levels will allow the leader to Lead and Empower their subordinates more effectively. Variables were identified to operationalize measures for Knowledge of Skills; Knowledge of Abilities; Knowledge of confidence Levels; Lead; and Empower Subordinates more Effectively. Highly significant positive correlations at $p < 0.01$ (two-tailed) were found between Knowledge of Abilities and Empower subordinates more effectively (.766); Knowledge of abilities and Lead more effectively (.702); Knowledge of Confidence Levels and Empower Subordinates more effectively (.666); Knowledge of Confidence Levels and Lead more effectively (.572); Knowledge of Skills and Empower subordinates more effectively (.492) and between Knowledge of Skills and Lead more effectively (.325). Thus Hypothesis 5 is also supported.

Hypothesis 6 proposed that knowledge of an individual team member's personality, interests and working preferences will allow a leader to lead and empower team members more effectively. The main researcher identified the variables to measure personality traits (that according to Belbin's theoretical framework lead to specific team role preferences and contributions they can make to lead and empower members more effectively), which were factor analysed; ideally, contributions would also be ascertained and discussed qualitatively, but the relevant data is currently not available (see limitations section). Correlations were then carried out to look at whether there were associations between the Belbin personality types and leading and empowering staff effectively. A significant positive correlation at the $p < .01$ level (two-tailed) was found between the Belbin role of Monitor –evaluator and leads (.312). Lower association coefficients at the $p < .05$ level (two-tailed) were found for the roles Teamworker (.228); Plant (.265); Coordinator (.225) and Resource Investigator (.252).

The Shaper, Completer-finisher and Implementer roles were not associated with Lead more effectively. Congruently the roles of Monitor-evaluator (.306) and Teamworker (.335) were strongly associated at $p < .01$ (two-tailed) with empowering subordinates more effectively. To a lesser extent the roles Completer-finisher; Implementer; and Coordinator were associated at the $p < .05$ level (two-tailed), (.222; .242; and .261 respectively). Thus Hypothesis 6 is also upheld.

Hypothesis 7 proposed that a supportive relationship with high quality exchanges leads to greater discretionary involvement in creative activities or CI programs. Variables were identified to measure supportive relationships; high quality exchanges; and discretionary involvement in a CI program (CIP), which were factor analysed and 1 factor for each was

identified. Supportive relationships was then correlated with high quality exchanges and subsequently correlated with greater discretionary involvement in the CIP. A significant positive correlation was found between supportive relationships and high quality exchanges at the $p < .01$ level (two-tailed) (.872), and between supportive relationships and discretionary power in the CIP (.306). Positive significant correlations at $p < .01$ were also found between creative activities and high quality exchanges (.433) and supportive relationships and creative activities (.322). Thus hypothesis 7 is supported.

Hypothesis 8 predicted that knowledge of individual team member's preferred team roles and preferred leadership style (i.e. Coaching, Supporting, Delegating and Directing) will allow situational leadership to be applied appropriately and effectively. However, different to the other propositions since the items described a profile of situations, they were individually correlated with the leadership style variables. The team role of Teamworker correlated at $p < .01$ with 'My leader directs how I undertake tasks' (.286) at $p < .01$. This situational variable correlates with the Hersey and Blanchard Telling (.773), followed by Participating (.751), Coaching (.542), and Delegating (.365) styles at the $p < .01$ level of significance. Suggesting that at different stages of readiness staff would respond to Supervisors. Teamworker role also correlated with 'My leader supports me in my tasks' (.252) at $p < .05$ lower level of significance. In terms of situational model it correlated with the Participating (.840), followed by Coaching (.658), Telling (.649) and Delegating (.437) at the $p < .01$ level of significance.

Shaper correlated with 'I like my leader to lead me differently' (.242) at $p < .05$. In terms of Hersey and Blanchard (1977) model it correlated with Delegating first (.754), then, Coaching (.334) at p. 001 and Telling (.233) at $p < .05$. Shaper also correlated with 'My leader supports me in my tasks' (.229) at $p < .05$; Hence, by Hersey and Blanchard (1977) types, Participating (.840) was first, followed by Coaching (.658), Telling (.649) and Delegating (.437) also at the $p < .01$ level of significance. Shapers also correlated with 'My leader leads everyone in the same' (.213) at $p > .05$. Hence, by Hersey and Blanchard (1977), Telling (.748), Coaching (.620), Participating (.532) and Delegating (.359) at $p < 0.01$.

Completer-finisher role correlated only with 'My leader supports me in my tasks' (.297) at $p < .01$. In terms of situational model types it correlated with the Participating (.840), followed by Coaching (.658), Telling (.649) and Delegating (.437) also at the $p < .01$ level of significance.

The team role Coordinator correlated with 'My leader directs how I undertake tasks' (.245) at $p < .05$. Thus also correlated first with the Hersey and Blanchard (1977) type Telling

(.773), followed by Participating (.751), Coaching (.542), and Delegating (.365) styles at the $p < .01$ level of significance. Coordinators also correlated with 'My leader supports me in my tasks' (.239) at $p < .05$; and by Hersey and Blanchard (1977) types, Participating (.840), followed by Coaching (.658), Telling (.649) and Delegating (.437) at $p < .01$.

The Plant role was correlated with 'My leader discusses with me how we will work together' (.257) at $p < .05$. Associated with Hersey and Blanchard (1977) types Coaching first (.820); Telling (.613), Participating (.591) and Delegating (.359).

The Monitor-evaluator role correlated with 'My leader supports me in my tasks' (.428) at $p < .01$ level of significance, thereby associated with Hersey and Blanchard (1977) types, Participating (.840), followed by Coaching (.658), Telling (.649) and Delegating (.437) at the $p < .01$ level of significance. Monitor-evaluators were also associated with 'My leader discusses with me how we will work together' (.214) at $p < .05$. Thus correlated first with the Hersey and Blanchard (1977) types Coaching first (.820); Telling (.613), Participating (.591) and Delegating (.359). Lastly Monitor-evaluators were also associated with 'My leader directs how I undertake tasks' (.316) at $p < .01$; thus correlated with Telling (.773), Participating (.751), Coaching (.542), and Delegating (.365) styles at the $p < .01$ level of significance.

The role Implementer correlates with 'I like my leader to lead me differently' (.293) at $p < .01$; and by Hersey and Blanchard (1977), *first* Delegating (.754) then Coaching (.334) at $p < .01$ and last Telling at $p < .05$. Implementers also correlated with 'The way my leader leads me has changed since I started the in the role' (.231) at $p < .05$ characteristic of the Coaching style first (.720), then Telling (.501), Participating (.434) and Delegating (.425) at $p < .01$.

Finally the Resource-investigator correlates with 'My leader supports me in my tasks' (.305) at $p < .01$. Thus, associated with Hersey and Blanchard (1977), Participating (.840), followed by Coaching (.658), Telling (.649) and Delegating (.437) at the $p < .01$ level of significance. Resource-investigators also were associated with 'The way my leader leads me has changed since I started the in the role' (.287) at $p < .01$, thus associated with the Hersey and Blanchard (1977) Coaching style first (.720), then Telling (.501), Participating (.434) and Delegating (.425) at $p < .01$. Resource-investigators were also associated with 'My leader directs how I undertake tasks' (.260); hence, correlating with the Telling (.773), Participating (.751), Coaching (.542), and Delegating (.365) styles at the $p < .01$ level of significance. Thus, overall results acknowledge differences but also similarities between: job roles and preferred leadership styles; and work situations and experiences, and support hypothesis 8.

Hypothesis 9 predicted that creative activities in team members will be facilitated by applying the apposite situational leadership style. The variables to operationalize creative activities and leadership styles were identified and factor analysed and then correlations were carried out to look at whether leadership styles would or would not facilitate creative activities.

Factor analysis identified 1 factor for creative activities. A significant positive correlation was found between 'Creative activities and Coaching leadership style (.454), at $p < .01$ level (two tailed) and a significant negative correlation for Creative activities with the Delegating style (-.454) at $p < 0.01$ and with directing (-.236) at the $p < .05$ level (two-tailed). No significant correlation was found for Creative activities with the Supporting style of leadership. Thus, hypothesis 9 is also upheld

Hypothesis 10 proposed that recognizing an individual's team role preferences and the contribution they can make will lead to more successful creative CI outcomes within a team. Factor analysis identified 1 factor for each of creative outcomes (eigenvalue 1.7) and CIP successful outcomes (eigenvalue 2.1) – see also the results for hypothesis 3.

The variables to measure 'Personality traits' (i.e. team role preferences) creative and more successful CIP outcomes were identified and factor analysed. Correlations were then carried out to look at whether there were associations between the Belbin Team role preferences and perceived successful outcomes in the CIP and, between Creative and perceived successful CIP outcomes. A significant positive correlation was found for the team role of Coordinator with Creative outcomes (.232), at the $p < .05$ level (two-tailed). For the Belbin team roles (indicative of Personality characteristics) and Successful CIP outcomes a significant positive correlation for the role of Completer-finisher (.338) at $p < .01$ level (two-tailed) was found. The roles Monitor-evaluator and Teamworker were also positively associated (.241 and .218) but at $p < .05$ level of significance (two-tailed).

Moreover, Creative outcomes and CIP successful outcomes positively correlated (.466) at $p < .01$ level. Thus, Hypothesis 10 is also supported.

Additionally, to find further explanation for the correlation findings, individual correlations were also carried out, i.e. personality styles were correlated with the items that make both the factors of 'creative outcomes' and 'successful CIP outcomes'. The Coordinator team role correlated highly with the variables 'My work function area is creative' and 'The work I do promotes creativity' (.368 and .341) at the $p < .01$ level. Congruently the Completer-finisher role was associated with the importance ascertained to the CI program and feeling a great deal of responsibility towards it (.281and .297 respectively) at the $p < .01$

level (two-tailed). Inconsistently, however, Monitor-evaluator correlates with 'the work I do promotes creativity' (.288) at $p < .01$. This analysis shows that, for the Teamworker role, the participants perceive the work they do as promoting creativity (.326) at $p < .01$, but this does not correlate with the output of their teams; this is consistent with the findings reported above.

The variable 'I feel a lot of responsibility for improvement' (.287 and) at $p < .01$ level two-tailed) and to a lesser extent the variable 'I think the continuous improvement programme is important' (.242) at $p < .05$ were also significantly associated with the Teamworker role. Interesting to note that, for the Teamworker, the responsibility to contribute to CI was associated with the perception of being able to contribute many ideas to the program.

Discussion

The primary aim of this paper is to propose an alternative operationalization of OCB focusing on the relationships between supervisors-supervisees to facilitate engagement in CI by supervisees offering DE. The focus is on developing and empirically testing the bespoke measure by Wagner et al. (2011) theoretically linking the constructs **of** empowerment (motivation, trust); creativity; Leadership style (situational leadership); personality type (evinced through preferred team roles by Belbin 1981, 1993, and 2010); and Leader-Member Exchange (evinced through Leader-subordinate relationships). In line with our hypotheses 1; 4; 5; 6; 7; 8; 9 and 10 our results consistently indicate that a focus on the quality of relationships between supervisors and supervisees derive in greater discretionary involvement by supervisees in OCB and CI. Specifically, the results show that Supervisors' ability to engender trust by applying situational leadership to followers' willingness and ability with flexibility, will contribute to engage motivate and empower supervisees to offer DE and creative abilities to CI; in turn increasing their job satisfaction.

However hypothesis 2 and 3; and 10 were only partially supported. We found no association between the Leadership styles of Hersey and Blanchard (1977) and an increase in confidence levels by supervisees (i.e. H2). No significant association was found for personal factors such as age; level of education; length of tenure; job role; time in current team; and personality characteristics measured through the different Belbin team roles, e.g. challenging Koberg's et al. (1999) findings (i.e. H3). Further, gender was found to have a tenuous relationship in the regression analysis results (H3), although the high predominance of the

male gender in the current study may have influenced this result. Thus, there is a need for this research to be repeated with a more gender balanced group. In the next section we examine the results' main patterns in greater detail and highlight the contributions to theory development on OCB and identify areas for development.

Contributions to theory development and implications for further research

This study set out to offer an alternative operationalization of OCB by looking into the dynamically evolving and competitive global manufacturing environment. We focused on the relationships between supervisors-supervisees to facilitate engagement in CI by supervisees offering DE. This set of results contributes to the OCB and CI literature in three key ways. **First**, it clearly establishes empirical support to the validity of the Wagner et al. (2011) bespoke tool summary of main constructs, highlighting a promising new focus for the OCB literature. That is, to focus on the quality of relationships between Supervisors-Supervisees; and on the appropriateness of using leadership styles tailored to employee level of ability to foster or hinder engagement in CI (e.g. see H1; H2 results). Thus, this work provides a useful concise theoretically-informed framework to apply to organisations in order to attain engagement in CI by motivating Supervisees to offer DE and OCB.

Second, it contributes to the development and the refining of the theoretical model by bringing to light how the constructs link together within the manufacturing industry and in Supervisors' and Supervisees' job roles, in that:

a) it points to the importance of examining the quality of relationships between Supervisors and Supervisees in order to increase job satisfaction, in line with Dewettinck et al. (2011) and OCB (H1);

b) it shows how situational leadership styles may be associated with employees' ability; level of empowerment; and engagement (H2). That is, Coaching and Directing leadership styles seem appropriate with Supervisees at a lower ability level. The Coaching leadership style is also perceived by Supervisees as empowering, while the Delegating and Directing styles are viewed as disempowering. The former is possibly due to Supervisees being at different levels of development within the manufacturing industry, thus adding to the literature on the implications of the employees' levels of readiness by Hersey and Blanchard (1977). Interestingly, the use of the different situational leadership styles did not correlate with improving Supervisees' confidence levels as expected. A possible explanation may be that it is the level of ability and the support required at each stage that needs to be the main focus for

Managers, in line with Blanchard (2009). Congruently, levels of Supervisee empowerment are also associated with ability and confidence (Sims et al. 2009 results concurred);

c) on one hand, it suggests that Supervisors being aware of Supervisees preferred Belbin team roles is useful, in accordance with Balderson and Broderick (1996). Since different team roles correlate at different level of significance with empowerment (i.e. the Coordinator displays the highest level of being empowerment (see H3). On the other hand, according to the literature reviewed (e.g. Koberg et al. 1999), personal variables such as: age; level of education; and length of tenure did not correlate with levels of empowerment, which challenge the findings of Hancer and George (2003); Koberg et al. *(*1999) and Ergelini et al. (2007).

The results suggest that to lead and empower subordinates more effectively it is more important to have an awareness of individuals' skills, abilities and confidence levels, in line with Hersey (2009) and Blanchard (2008) (see H5).

Third, the link between creativity and CI has been well established e.g. by Amabile et al. (1996) and Furnham and Bachtiar (2008), and in this research it was clearly shown that developing trust between the Supervisor and Supervisee is the antecedent to forming empowering relationships that enable fulfilment of creative potential and engagement in CI. Very importantly, the results recognized that supportive relationships with high quality exchanges (Elkins and Keller, 2003, model) lead to greater discretionary involvement in innovation within CI, adding a new focus to the literature on OCB and innovation.

Further, results have reinforced the suggestion by Atwater and Carmeli (2009) of a link between situational leaderships and creativity (H8). That is, they have suggested that providing Supervisees with the adequate level of support, direction, or delegation would lead individuals to be prone to get engaged in creative activities. Congruently with this thesis, Coaching was the leadership style that emerged as being more conducive to engage Supervisees in creative activities (H9). Conversely, it has also informed that the Supporting, Delegating and Directing styles would inhibit involvement in creative pursuits. A possible explanation here, again based on Hersey and Blanchard (1977) theorizing, may be that this could be indicative of staff needing to be at a state of empowerment and readiness before enabling their creative endeavors.

The results of H10 are both interesting and challenging as they demonstrate that recognising an individual's team role preferences and the contribution that they can make will lead to more creative CI outcomes within a team. Indeed, in accord with Furnham and

Bachtiar (2008) thesis, these results suggested a link between: team roles indicative of personality traits by Belbin and creative outcomes for the role of Coordinator; and CIP creative outcomes and successful CIP. In turn, adding to the literature on creativity (e.g. Furnham and Bachtiar, 2008; and Augsdorfer, 2008). Moreover, the thesis that an ideal team to be creative requires a Plant to improve creativity and inspire others (Titterington, 2010), is also challenged in this results. Indeed, the role of Plant correlated with neither creative outcomes, nor successful CIP outcomes. Additionally, in the further analysis carried out to confirm and check understanding, while expectations were for the role of Monitor-evaluator to contribute least to creativity, this role correlated at $p<.01$ with the variable 'the work I do promotes creativity'. A possible interpretation is that the participants did not fully understand the questions or that, in line with Fisher et al. (2002), this finding could add to raise questions on the validity of the Belbin model.

Fourth, the results clearly suggest that different team roles are associated with situational leadership styles, thereby enabling a more effective management of human capital (c.f. (Maman 2000; Dess and Shaw 2001)) and, again, establishing a new link in research. That is, knowledge of Supervisees' preferred team roles may be useful indicators of their behaviours and Supervisory style needs e.g. Teamworkers at an earlier stage require their supervisors to use a Telling leadership style, then move through a continuum of Coaching, Participating and finally to the Delegating styles, depending on situations (see H8 for the different associations between team roles and perceived appropriate situational leadership styles). Furthermore, reinforcing the previous results that it is beneficial for Supervisors to know their Supervisees well and to know what leadership style to use according to situation and staff level of ability (H8 and H3).

Finally, differing constellations of team member personality characteristics, as related with team roles that may enable Supervisors to lead and empower staff more effectively, were brought to light (e.g. Monitor-evaluators were perceived as the subordinates to be most effectively empowered, whilst Shapers, Implementers and Completer Finishers emerged as the least). Importantly, as far as our literature review has ascertained, no research has been undertaken on this before. On the other hand, it may be argued that this study adds to the literature arguing for the impact of personality impinging on OCB (e.g. Organ and Lingl 1995)

Limitations of present research and future research

This study, however, has some methodological constraints. First, according to Glomb et al. (2011), relationship exchanges can be mediated by mood, which needs to be carefully managed and contained by the Manager. Thus, to increase the reliability and validity of this tool the need to control for this variable should be addressed in future research. Second, the personality traits of altruism leading to greater levels of agreeableness in organizations (see Organ and Lingl, 1995, p340), could also moderate the quality of relationships and staff engagement in CI, thus impacting on DE and OCB delivered. Third, environmental factors such as; culture, nature of work and work-life balance can also influence individuals' decisions to engage with additional tasks like CI, hence also needs to be examined in tandem. Fourth, for pragmatic reasons, the rich qualitative data from the employee interviews have yet to be translated and transcribed thus, Finally, further research ought to refine and update this tool in relation to the findings of this research and apply it to other organisational settings concurrently with qualitative questions to analyse the views and behaviours of supervisors and supervisees undertaking CI programs.

Conclusions

To conclude, this study builds on a new emphasis to research on OCB by providing new insights and empirical evidence within a manufacturing context, focusing on the relationships between Supervisors and Supervisees and linking DE to engage employees in CI. With the adoption of rigorous mathematical factor analysis approach, the validity and reliability potential of the proposed CI bespoke tool is ensured. This research interestingly finds that a narrower number of constructs than those in the original CI bespoke tool (Wagner et al. (2011)) can be used by organisations when aiming at attaining high levels of engagement in CI by motivating employees to offer DE over and above their job description requirements. Thus, this adds value to the initial conceptualization, which will be explored with the design of an updated theoretical model in a future paper.

However, it may be argued that this new avenue for research may also reveal diverse corporate socio-ethical issues, if it leads to being used to increase already-stretched employees' timetables; this may lead to lower well-being over time. On one hand, it adds to the body of research arguing for the value of considering personality antecedents to understand organizational phenomena such as OCB (e.g. Strobel et al. 2013; Chiaburu et al. 2011; Raja and Johns 2010)), by empirically examining a controversial theoretical framework widely used in the world of work and finding agreement with its general usefulness (i.e.

Belbin team role types). On the other hand, it challenges the validity of the team role of Plant, which is associated in previous research as facilitating creativity in teamwork. Further research needs to be conducted to bring light to this finding. Overall, our theorising and results suggest innovative directions for future research.

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Table 1. Cronbach alpha values for the six themes

Section/Theme	Title	Items	Cronbach alpha
1	Employee Engagement	16	0.795
2	Creativity	20	0.867
3	Job motivation	20	0.821
4	Team roles	24	0.846
5	Leadership style	12	0.867
6	Leader/subordinate relationships	22	0.958

Table 2.1. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.309[a]	.095	.027	.43900

a. Predictors: (Constant), How long have you been in your current team?, What is the highest level of education you have completed?, How would you describe your primary job role?, What is your age group?, Are you male or female?, How long have you worked at the organization?
b. Dependent Variable: Empowerment

Table 2.2. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.234	.258		12.515	.000
	Are you male or female?	**-.242**	**.119**	**-.221**	**-2.037**	**.045**
	What is your age group?	.140	.108	.143	1.301	.197
	How long have you worked at the organisation?	-.031	.055	-.082	-.574	.567
	How would you describe your primary job role?	.074	.068	.117	1.091	.278
	How long have you been in your current team?	.033	.075	.062	.439	.662

a. Dependent Variable: Empowerment

Table 2.3. ANOVA[b] Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.623	6	.270	1.403	.224[a]
	Residual	15.418	80	.193		
	Total	17.041	86			

a. Predictors: (Constant), How long have you been in your current team? What is the highest level of education you have completed?, How would you describe your primary job role?, What is your age group?, Are you male or female?, How long have you worked at the organization?
b. Dependent Variable: Empowerment

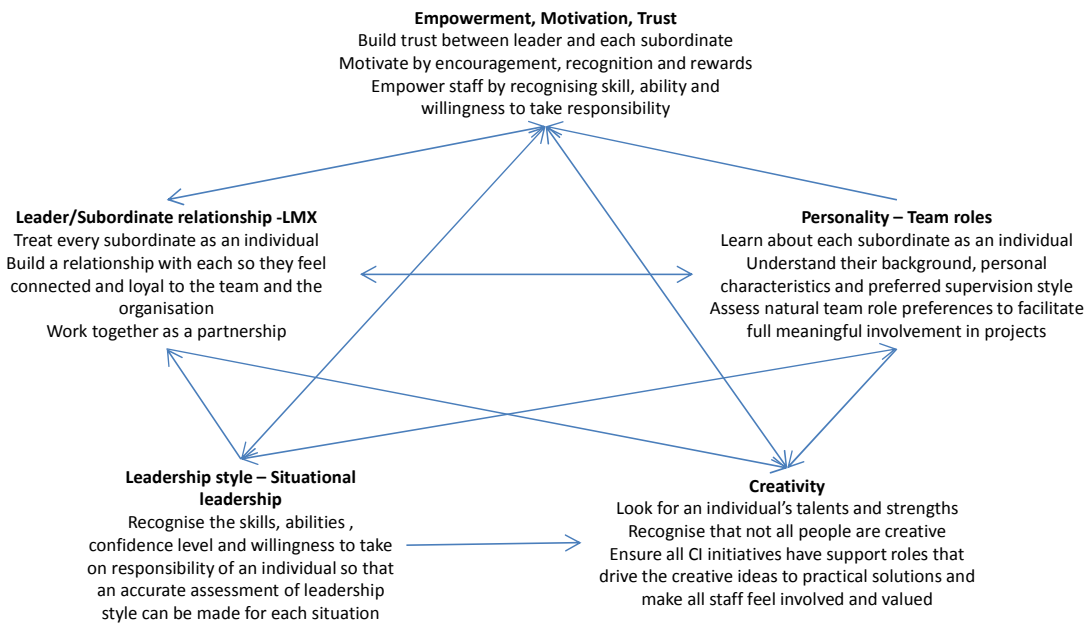

Figure 1. Model of constructs increasing employees' engagement in OCBs within CI programs (Wagner et al. 2011).

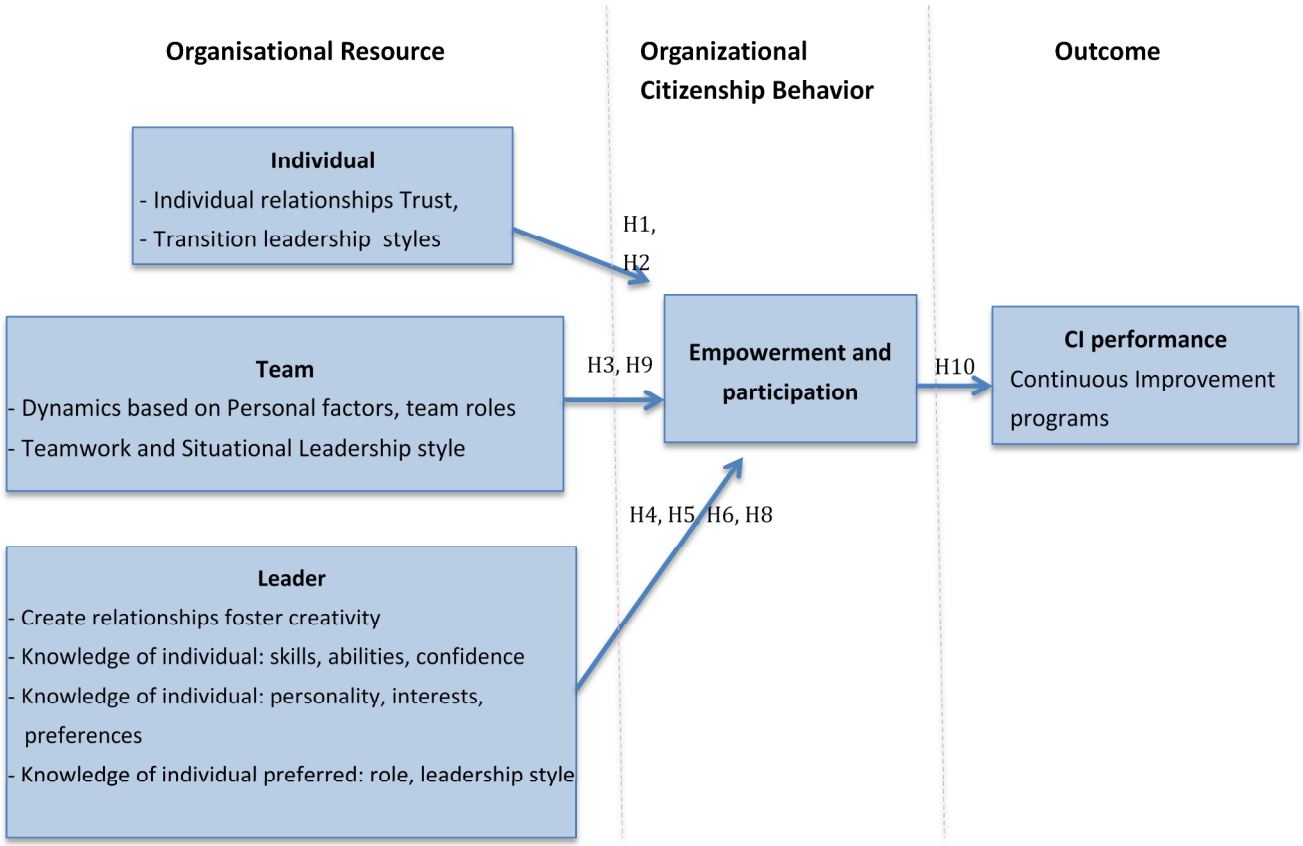

Figure 2. Schematic inter-relationship of the research hypotheses and constructs