On the merits of coherent leadership empowerment behaviors: A mixture regression approach

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Abstract

This study aims to verify Lawler's (1992, 2008) theoretical proposition that the complementariness and coherence of leadership empowerment practices (LEB) need to be jointly considered in order to adequately understand their relation with employees' levels of behavioural empowerment. Patterns of relations among three LEB (Delegation, Coaching, and Recognition), and five indicators of behavioral empowerment were analyzed among a sample of 474 Canadian employees. Lawler's proposition was tested using a person-centered mixture regression approach. The results revealed four distinct profiles of employees. At the profile level, results reveal that the joint implementation of a similar level of LEB in a complementary manner relates to employees' levels of behavioral empowerment. However, within each profile, a lack of coherence in the levels of implementation of the three LEB resulted in a more complex pattern of associations with employees' levels of behavioral empowerment. Taken together, these results offer practical guidance to guide supervisors in their utilization of LEB.

Keywords: Leadership empowering behaviors, behavioral empowerment, coherence, mixture regression, person-centered analyses.

Highlights

- A person-centered approach partially validates Lawler's theoretical proposition on empowerment
- Jointly implementing high levels of Delegation, Coaching and Recognition leads to higher levels of empowerment
- In line with theory, unbalanced Recognition has negative relations with empowerment
- Contrary to theory, unbalanced Delegation and Coaching have respectively positive and mixed effects on empowerment

Leadership empowerment behaviors (LEB) are behaviors that can be implemented by a formal leader with the goal of enhancing employees' autonomy through the delegation of authority, the promotion of autonomous decision-making, and other autonomy-enabling practices such as coaching, feedback and information sharing (Sharma & Kirkman, 2015). Thus, LEB are seen as key managerial practices for managers aiming to encourage the behavioral manifestations of employee empowerment (Boudrias, Gaudreau, Savoie, & Morin, 2009; Maynard, Gilson, & Mathieu, 2012). Behavioral empowerment (BE) occurs when employees' work behaviors are characterized by an active involvement in actions that contribute to ensure their work efficacy and the continuous improvement in their tasks, their work group, and the whole organization (Boudrias, Morin, & Lajoie, 2014).

However, research conducted on the relations between LEB and empowerment-related outcomes has tended to yield inconsistent results (Sharma & Kirkman, 2015). If some studies indicate that LEB tend to promote empowerment (e.g., Srivastava, Bartol, & Locke, 2006) others indicate the opposite (e.g.: Ahearne, Mathieu & Rapp, 2005; Cordery, Morrison, Wright & Wall, 2010). Moreover, some studies even noted the presence of U-shaped and inverted U-shaped curvilinear relations between LEB and empowerment-related outcomes (e.g., Humborstad & Kuvaas, 2013, Humborstad, Nerstad, & Dysvik, 2014, Sharma & Kirkman, 2015), suggesting LEB may be both beneficial and detrimental based on the level at which they are displayed by supervisors.

Proposed more than 25 years ago, Lawler's (1992) theory of empowerment provides a possible explanation to these apparently paradoxical results. Lawler (1992, 2008) first proposed that, in order to optimally empower employees, supervisors need to implement a set of complementary LEB covering the basic conditions for empowerment (*Complementariness*). Second, he proposed that this set of LEB should be implemented in a coherent manner, at a similar level of intensity across LEB (*Coherence*). When these two principles are respected, then the relation between LEB and empowerment indicators such as BE is expected to be positive and linear (Bowen & Lawler, 1995). This theory thus suggests that two immediate supervisors displaying the same intensity of one particular LEB (e.g., Delegation) could empower subordinates differently depending on the level at which they implement concomitant LEB (e.g. Coaching, Recognition). More precisely, this proposal implies that uneven levels of LEB could be detrimental, regardless of whether they are implemented at a low, moderate or high level.

Until now, research on the associations between LEB and outcomes had mostly been done with variable-centered approaches (e.g. Sharma & Kirkman, 2015), which can fail to detect such complex patterns of relations, such as those proposed by Lawler (1992, 2008) to occur between LEB and BE. In addition, studies typically rely on a single composite score of LEB, rather focusing on distinct LEB practices (e.g., Ahearne et al., 2005; Boudrias et al., 2009; Harris, Li, Boswell, Zhang & Xie, 2014; Raub & Robert, 2010), making it impossible to assess Lawler's principles of complementariness and coherence. Arguably, these factors might partly explain why Lawler's propositions gradually faded out from the empowerment literature. In the spirit of substantive-methodological synergies (Marsh & Hau, 2007), which seeks to provide new perspectives on old and unsolved debates, his study proposes a person-centered mixture regression approach as a way to provide a new test of Lawler's (1992, 2008) proposition. More specifically, we investigate how configurations of three LEB (Delegation, Coaching and Recognition), are related to five key dimensions of BE (efficacy in performing job tasks, improvement efforts in job tasks, effective collaboration in the work group, improvement efforts in the work group, and involvement at the organizational level; Boudrias et al., 2010).

Lawler's Theory: Complementariness and Coherence

Lawler's (1992, 2008) theoretical proposition suggests that the effects of LEB will be maximized when immediate supervisors are able to implement a complementary set of critical LEB assumed to cover all of the necessary conditions for the emergence employees' empowerment. We refer to this aspect of Lawler's proposition as *Complementariness*. Second, Lawler adds that these complimentary LEB need to be aligned with one another in intensity to optimize employees' levels of empowerment (Bowen & Lawler, 1995). We refer to this second aspect as *Coherence*.

Complementariness

According to Lawler (1992) a complementary set of LEB is one that offers subordinates four basic conditions for empowerment: (a) the power to act autonomously (b) relevant information about the organization, (c) opportunities to acquire knowledge and skills, and (d) contingent rewards. Lawler (1992) never proposed a specific set of leadership behaviors to be considered in research as providing an adequate coverage of these four conditions. However, a recent study by Sinclair, Boudrias, and

Lapointe (2014) showed that three complementary leadership behaviors, *Delegation, Coaching,* and *Recognition*, provide a parsimonious synthesis of LEB. These three LEB have consistently been identified as "empowering" for employees (Amundsen & Martinsen, 2014; Arnold, Arad, Rhoades, & Drasgow, 2000; Konczak, Stelly, & Trusty, 2000; Pigeon, Montani, & Boudrias, 2017), and seem to offer a complete coverage of Lawler's (1992) four basic conditions of empowerment.

Delegation aims to provide employees with the latitude to display autonomy at work (Condition a). Delegation is defined as the transfer of power from the supervisor to the subordinates, to give them the freedom to accomplish their work in an autonomous way (Arnold et al., 2000).

Coaching encompasses managerial behaviors aiming to help employees to assume a more autonomous role. It involves providing them with advice or important information pertaining to the work context, supporting them in enacting their work role as efficiently as possible, and helping them in the identification of further training needs (Arnold et al., 2000; Konczak et al., 2000). Therefore, Coaching makes it possible to provide employees with information about the organization as well as opportunities to acquire new skills and knowledge (Conditions B and C).

Although Lawler (1992) argued that rewards (Condition D) must be monetary, the reality of many organizations is that immediate supervisors often lack the means to provide monetary rewards. However, supervisors are typically able to offer non-monetary rewards such as praise or recognition (Amundsen & Martinsen, 2014), which has generally been identified as an equally effective way to empower employees (Sumukadas, 2006). More precisely, *Recognition* occurs when the immediate supervisor shows appreciation to employees and recognizes their good performance (Amundsen & Martinsen, 2014; Migneault, Rousseau & Boudrias, 2009). It has the ability to stimulate, reinforce, and support BE by communicating to employees the appreciation of their ability to meet job requirements, for displaying autonomy and initiative, and for contributing to the efficient functioning of their group and organization (Bandura, 1986; Conger & Kanungo, 1988).

In summary, the first component of Lawler's (1992, 2008) proposition allows us to expect that Delegation, Coaching and Recognition would form a parsimonious yet sufficient set of LEB for the emergence of BE. More precisely, it suggests that exposure to higher levels of these LEB should lead to higher levels of BE. However, this set of LEB needs to be implemented with coherence.

Coherence

Lawler (1992, 2008) notes that there is a risk in implementing a set of LEB that only offers some of the basic conditions of empowerment, or that covers all basic conditions but at an uneven intensity, suggesting that such lack of coherence may explain some of the negative effects of LEB. For example, delegating the power to act autonomously without also making sure that subordinates also develop the skills and knowledge needed to make the right decisions could lead to negative consequences for the organization (e.g., Cordery et al., 2010). Furthermore, when subordinates are left on their own to make critical work-related decisions without possessing the required skills and knowledge, they may end up developing feelings of anxiety and helplessness when facing their newly increased professional responsibilities (e.g., Nagel, 2010). Alternatively, subordinates who acquire skills, knowledge and information without having the latitude to act on them may develop feelings of frustration and demobilization. Finally, Lawler (1992) mentions that access to contingent rewards is critical to promote sustained motivation among an empowered workforce (e.g., de Cremer, Van Knippenberg, Van Knippenberg, Mullenders, & Stinglhamber, 2005). Indeed, subordinates may be reluctant to rely on their newly acquired competencies to increase their autonomous involvement at work, rather than persisting in routine work behaviors, when they see no benefits to these increased levels of efforts.

Thus, Lawler's (1992) theory suggests that all four basic conditions of empowerment should be offered through the implementation of high levels of Delegation, Coaching, and Recognition. Indeed, Bowen and Lawler (1995) note that as long as levels of these three practices are well-aligned with one another, relations between LEB and BE can be expected to be linear, so that a moderate level of coherent LEB can be expected to generate a moderate level of BE (which may be more desirable than a high level in some contexts). Similarly, a low level of coherent LEB should generate a low level of BE. However, when only a subset of these basic conditions are met through the implementation of a partial set of LEB, or when LEB are implemented unevenly, they are likely to fail to generate the desired levels of BE. In sum, Lawler's (1992) theory allows us to formulate the following hypotheses:

Hypothesis 1: Employees exposed to a configuration of Leadership Empowerment Behaviors characterized by higher matching levels of Delegation, Coaching and Recognition should display

higher levels of Behavioral Empowerment than those exposed to a configuration characterized by lower, or disparate, levels of Leadership Empowerment Behaviors.

Hypothesis 2: Discrepancies in the level of exposure to each specific Leadership Empowerment Behaviors (Delegation, Coaching and Recognition) relative to the other will be accompanied by a decrease in levels of Behavioral Empowerment.

A Person-Centered Mixture Regression Approach

In the present study, we propose a person-centered mixture regression approach to test the hypotheses based on Lawler's (1992) propositions. In their most simple expression, person-centered analyses identify subgroups of participants, referred to as profiles, differing from one another regarding their configuration on a set of variables (e.g., Meyer & Morin, 2016; Morin, Morizot, Boudrias, & Madore, 2011). When estimated within the larger Generalized Structural Equation Modeling (GSEM; Muthén, 2002) framework, it becomes possible to extract profiles differing from one another on any part of any form of measurement or predictive models (Morin, 2016; Morin & Wang, 2015). Of particular interest to this study are mixture regression analyses (Henson, Reise, & Kim, 2007; Van Horn et al., 2009). In their most basic operationalization, mixture regression analyses identify profiles differing from one another at the level of estimated relations (regressions) between constructs. However, the hybrid mixture regression approach used in the present study goes further (Morin, 2016; Morin, Scalas, & Marsh, 2015; Morin & Wang, 2016), and allows for the identification of profiles differing simultaneously based on: (a) their configuration on a set of predictors and outcomes (i.e., the *between-profile* component), and (b) the relations between these predictors and the outcomes (i.e., the *within-profile* component). It is the ability to disaggregate relations occurring between predictors and outcomes into these two components which provides a direct test of Lawler's (1992, 2008) principles of Complementariness and Coherence.

Between-Profile Component. In the hybrid mixture regression approach proposed here, the profiles are first allowed to differ from one another based on their configuration on a set of predictors and outcomes. By comparing profiles defined based on the configuration of scores on all of the predictors and outcomes, this between-profile component thus describes the global shape of the relation between LEB and BE as it occurs at the profile-level. More precisely, distinct profiles of participants will be identified based on the average level of Delegation, Coaching and Recognition as well as their corresponding level on each of the five manifestations of BE. This component thus provides a direct test of *Hypothesis 1* by showing whether the profiles are characterized by matching levels of Delegation, Coaching and Recognition, and whether the levels of BE observed in each of these profiles match the levels of correspond to the levels of LEB observed in the same profiles.

Within-Profile Component. In this hybrid approach, another component of the relation occurring between LEB and BE can also be identified given that within-profiles relations are also freely estimated between these predictors and outcomes. This within-profile component thus provides a dynamic picture of the inter-individual variation which occurs within-each profile. More precisely, in most forms of mixture models, participants are not expected to correspond exactly to the configuration of scores describing the profile itself. Rather, these models allow for the estimation of within-profile variation around this average configuration, and the hybrid mixture regression approach advocated in this study relies on this within-profile variation in LEB to predict within-profile variation in BE levels. It is this component of the model which provides a direct test of *Hypothesis 2*, related to Lawler's (1992, 2008) Coherence principle. As in any analysis of regression, these within-profile regressions reflect the effects of each predictor "all things being equal" (i.e., net of what it shares with the other predictors). Because these regressions are estimated within each profile, this component thus provides a direct estimation of the effects of within-profile deviations on a single LEB practice net of what this specific LEB shares with the other LEB in this specific profile. As such, these regressions reflect the effect of within-profile incoherence in the levels of one LEB practice relative to the others.

Methodology

Sample

A convenience sample of 474 French Canadian employees was recruited from a wide variety of industries (e.g.: automotive, home-products manufacturing, transportation management, sales, and services - miscellaneous) to participate in this study. In order to reach as many participants as possible, two sampling methods were used to recruit participants. First, invitations to participate to this study were posted using social medias (e.g.: Facebook). Then a link to a web-based questionnaire was sent

to interested participants by email. Second, organizations in the manufacturing and automotive sectors were solicited. In those organizations, participants answered either via a web-based or a paper-pencil questionnaire depending on the organization's choice. All participants were assured of the confidentiality of their individual responses. No incentive was offered in exchange for participation. All participants had to work full-time (30 hours per week). Participants were mostly men (60%), under 35 years of age (57%), with a post-secondary education or a professional diploma (68%), and had a tenure of three years or more (52%).

Measures

Demographics. Participants were asked to indicate their sex, age, education, organizational tenure, size of work unit, weekly work hours and job stability.

LEB. LEB were assessed using a questionnaire developed by Sinclair et al. (2014) based on the work of Arnold et al. (2000), Konczak et al. (2000) and Migneault et al. (2009). This questionnaire assesses three types of LEB: Delegation, Coaching and Recognition. Sinclair et al. (2014) study demonstrated adequate levels of scale score reliability (.83<α<.92), and that the three LEB were positively associated with the five behavioral indicators of BE. In this study, Delegation was assessed with five items (α = .88; e.g., "*My immediate supervisor gives me the power that corresponds to my responsibilities*"). Coaching was assessed with four items (α = .84; e.g., "*My immediate supervisor suggests new ways to improve my performance*"). Recognition was assessed with 5 items (α = .91; e.g., "*My immediate supervisor shows me his appreciation for my contributions*"). Items were rated on a 5-point rating scale ranging from 1 (never) to 5 (always).

BE. The Behavioral Empowerment Scale (Boudrias et al., 2010) was used to evaluate employees' BE. Three items were used to measure each of five BE dimensions, for a total of 15 items: (a) efficacy in performing job tasks (α = .87; e.g., " *Adequately carry out the tasks related to my job*"), (b) improvement efforts in job tasks (α = .85; e.g., "*Put into practice my ideas for improvement in my work*"), (c) effective collaboration in the work group (α = .82; e.g., "*Provide constructive feedback that helps my coworkers*"), (d) improvement efforts in the work group (α = .87; e.g., "*Introduce new ways of doing things in my work group*"), and (e) involvement at the organizational level (α = .86; e.g., "*Make suggestions to improve the organization's functioning*"). These items were rated on a 10-point rating scale ranging from [almost never (0-10% of possible occasions)] to 10 [almost always (90%-100% of possible occasions)].

Confirmatory factor analysis (CFA) and exploratory structural equation modeling (ESEM) were performed and supported the factor validity of all measures (CFA: $\chi^2[35]=675.84$, p.<.05, CFI=.95, TLI=.94, RMSEA=.04; ESEM: $\chi^2[29]= 458.53$, p.<.05, CFI=.97, TLI=.96, RMSEA=.04). The ESEM showed a better fit to the data and was used to produce factor scores used in the main analysis. Please note that a thorough examination of these measurement models is reported in the online supplements available at [WEBLINK TO BE DISLOSED]. Latent correlations and estimates of composite reliability from these measurement models are reported in Table 1.

Analyses

Mixture regression analyses (Morin et al., 2015; Morin & Wang, 2016; Muthén, 2002) were conducted based on factor scores reflecting participants' levels on each of the three dimensions of LEB and each of the five dimensions of BE, using the robust Maximum Likelihood estimator available in Mplus 7.3 (Muthén, & Muthén, 2014). Although factor scores do not explicitly control for unreliability as well as latent variables, they provide a partial control for measurement errors by giving more weight to the more reliable items (Skrondal & Laake, 2001). An additional advantage of factors scores is their ability to preserve the nature of the measurement model, which is especially important when they are based on complex models such as the ESEM model used here (for further explanations, see Morin et al., 2017; Morin, Meyer, Creusier, & Biétry, 2016).

Mixture regression analyses were conducted using 10,000 random sets of start values, 500 iterations, and retaining the 1000 best solutions for final optimization (Hipp & Bauer, 2006; Morin & Wang, 2016). These models were estimated allowing the predictive paths between the normally distributed continuous factor scores representing all predictors (LEB) and outcomes (BE) to be freely estimated in all profiles, as well as the mean means and variances of all predictors and outcomes (Henson et al., 2007; Morin, Maïano et al., 2011; Wedel, 2002).

Starting with a one profile model, models including an increasing number of latent profiles were progressively estimated, until the addition of profiles resulted in model non-convergence (which

occurred at eight profiles in the current study). The resulting models were contrasted with one another in order to select the most optimal solution (Morin, 2016; Morin & Wang, 2016). To select this optimal number of latent profiles, we examined the theoretical meaning and conformity of the profiles (Marsh, Lüdtke, Trautwein, & Morin, 2009; Muthén, 2003), the statistical adequacy of the solution (i.e., replicated log likelihood, absence of negative variance estimates, absence of warnings, etc.; Bauer & Curran, 2003), and a number of statistical indicators: (i) the Akaïke Information Criterion (AIC); (ii) the Consistent AIC (CAIC), (iii) the Bayesian Information Criterion (BIC), (iv) the Sample-size adjusted BIC (SABIC), (v) the Integrated Classification Likelihood BIC (ICL-BIC; McLachlan & Peel, 2000), (vi) the Adjusted Lo, Mendell and Rubin's (2001; aLMR) Likelihood Ratio Test, (vii) the Bootstrap Likelihood Ratio Test (BLRT). A lower value on the AIC, CAIC, BIC, SABIC, and ICL-BIC suggests a better-fitting model. The LMR and BLRT compare a *k*-class model with a *k-1*-class model. A significant *p*-value indicates that the *k-1*-class model should be rejected in favor of a *k*-class model. Simulation studies (e.g., Henson et al., 2007; Nylund, Asparouhov, & Muthén, 2007) showed that when the indicators failed to retain the optimal model, the AIC, SABIC, ICL-BIC, LMR and BLRT tend to overestimate the number of profiles, whereas the BIC and CAIC tend to underestimate it. It should be noted that these tests remain heavily influenced by sample size (Marsh et al., 2009), so that with sufficiently large samples, they may keep on suggesting the addition of profiles without reaching a minimum. In this situation, the indices that do converge on a specific solution should be privileged and, when none do favor any specific solution, the point at which these indicators appear to reach a plateau can be used to suggest the optimal solution (Morin, Maïano et al., 2011). Finally, we also report the entropy, which should not be used to select the optimal number of profiles but provides a useful summary of the accuracy of participants' classification into the profiles. Indeed, it is in any applications of mixture models, the extracted profiles are prototypical in nature, so that each participant has a probability of corresponding to each of the identified profiles. The entropy varies from 0 to 1, with higher values indicating a higher classification accuracy.

For descriptive purposes, we compared the demographic composition (sex, age, education, job stability, organizational tenure, weekly work hours, and size of work unit) of the profiles using the Mplus AUXILLIARY (e) function. This procedure relies on a Wald test of significance based on pseudo-class draws (Asparouhov & Muthén, 2007) without having to directly integrate the covariates into the model (e.g., Morin, Morizot et al., 2011). For interested readers, we also provided annotated Mplus input code for the estimation of mixture regression models in the online supplements.

Results

The fit indices of the alternative mixture regression solutions are reported in Table 2. The CAIC and BIC both reached their lowest point for the four-profile solution, the ICL-BIC reached its lowest point for the five-profile solution, the aLMR supported a three-profile solution, while the AIC, SABIC and BLRT failed to converge on any specific solution. Examination of the three-, four-, and five-profile solutions further revealed that the four-profile solution resulted in the highest classification accuracy (entropy) out of the three alternative solutions, and resulted in an additional meaningful and fully interpretable profile compared to the three-profile solution. In contrast, the five-profile solution did not add any meaningful information over and above that provided by the four-profile solution. Consequently, the four-profile solution was retained for interpretation.

The mean levels of each predictor (LEB dimensions) and outcomes (BE dimensions) in each of the profiles are reported in Figure 1 (the exact values are reported in Table S5 of the online supplements). Keeping in mind that these profiles are estimated based on factor scores with a mean of 0 and a variance of 1, these mean-levels can directly be interpreted as deviations from the sample mean in standard deviation units. Here is a brief description of each profile.

Profile 1 is an "*Optimal*" profile, corresponding to 23% of the sample who report being exposed to high levels of Delegation, Coaching, and Recognition, and demonstrating higher than average levels on all BE dimensions. Profile 2 corresponds to 21% of the sample who report being exposed to average levels of Delegation, Coaching, and Recognition. These employees report higher than average levels of efficacy in performing their job tasks, slightly above average levels of improvement efforts in their tasks, and lower than average levels on all dimensions of BE targeting the work group or the organization. We refer to this profile as "*Moderately-Empowered Task-Focused*". Profile 3 reflects 32% of the sample reporting being exposed to slightly above average levels of Delegation, Coaching, and Recognition (in between the levels observed in Profiles 1 and 2). In contrast to what was observed

in Profile 2, these employees report close to average levels of task-focused BE, but above average levels of BE focused on the group and the organization. We refer to this profile as "*Moderately-Empowered Social-Focused*". Finally, Profile 4 describes 24% of the sample reporting being exposed to low levels of LEB, and displaying low levels of BE. We refer to this profile as "*Non-Empowered*".

At the profile level, these four profiles present a complementary and coherent configuration of LEB, showing on the average equal levels across all LEB dimensions. The global level of BE observed across dimensions also varies in a manner that is directly proportional to the average level of LEB observed in each profile. These results thus provide support to *H1*, showing that when employees mention receiving higher levels of Delegation, Coaching and Recognition, they also report using higher levels of BE across all dimensions, supporting a linear relationship at the profile level.

Within-profile regressions estimated between LEB dimensions and BE are reported in Table 3. These regressions provide a direct estimate of the effects of within-profile incoherence by describing the effect of using one LEB practice more or less frequently than the others. Results reveal statistically significant within-profile associations mainly between LEB and the task-related dimensions of BE (i.e. efficacy in performing job tasks, improvement efforts in job tasks). No significant differences were found for the group-oriented dimensions of BE (Collaboration-Group; Improvement-Group).

For all profiles, within-profile deviations in Delegation showed that incoherently higher levels of Delegation were associated with higher levels of efficacy in performing job tasks. Moreover, the strength of this association tends to increase as a function of the overall average level of empowerment observed in the profiles (i.e., profiles 4 to 1: .31 > ß > .71).

Effects of within-profile incoherence in Coaching are also apparent, yet differ from one profile to the other. Higher within-profile levels of Coaching relative to the other LEB presented statistically significant positive associations with improvement efforts in performing job tasks in Profile 1 (*Optimal*), as well as with both efficacy and improvements in performing job tasks in Profile 4 (*Non-Empowered*). However, within-profile increases in Coaching relative to the other LEB negatively predicted levels of efficacy in performing job tasks in Profile 3 (*Moderately-Empowered Social-Focused*). Therefore, in Profile 3 an incoherent managerial focus on Coaching to the detriment of other LEBs carried a risk of decreasing employees' efficacy in performing their tasks.

Within-profile incoherence in terms of Recognition is negatively related to BE dimensions in Profiles 1 (*Optimal*), 2 (*Moderately-Empowered Task-Focused*) and 4 (*Non-Empowered*), but not in Profile 3 (*Moderately-Empowered Social-Focused*). Additionally, in Profile 2 (*Moderately-Empowered Task-Focused*) a more pronounced focus on Recognition compared to the other LEB also predicts lower levels of improvement efforts in performing job tasks, and of involvement at the organizational level. Finally, for Profile 4, higher levels of Recognition are positively associated with organizational involvement. Incoherence induced by an unbalanced focus on Recognition thus appears to be the most deleterious component of LEB, particularly for task-related BE facets.

Taken together, these results do not support *H2*, but still provide an interesting perspective on the effects of coherence. In the presence of coherent levels of Delegation, Coaching and Recognition, the prediction of BE is fairly simple and linear. However, in presence of incoherence, the prediction of (mostly) task-oriented dimensions of BE becomes very complex.

Finally, for descriptive purposes, we contrasted the profiles on demographic correlates. The results of these comparisons are reported in Table 4. These results show few differences, supporting the idea that the nature of the profile is a function of LEB and BE, rather than sex, job status, tenure, or size of the work unit. However, a few differences related to age, education levels, and weekly work hours have to be considered. Thus, members of profile 4 (*Non-Empowered*) appear younger than those from Profiles 2 and 3 (*Moderately-Empowered*), who themselves appear younger than those from Profile 1 (*Optimal*), suggesting that empowerment and efficacy are partly a function of age (but interestingly not tenure). Then, members of Profile 3 (*Moderately-Empowered Social-Focused*) appear slightly more educated than members of the other profiles, which could partly explain their apparent reluctance to receive higher than average levels of Coaching. Finally, employees corresponding to Profiles 1 (*Optimal*) and 3 (*Moderately-Empowered Social-Focused*) tend to work slightly more hours than those from Profiles 2 (*Moderately-Empowered Task-Focused*) and 4 (*Non-Empowered*).

Discussion

The first aspect of Lawler's (1992) theoretical proposition states that the implementation of high levels of a complementary set of LEB should be maximally efficient in terms of encouraging

employees' BE. In support of this hypothesis, this study identified profiles of employees characterized by similar levels of complementary LEB, accompanied by matching levels of BE components. More precisely, employees reported matching levels of Delegation, Coaching and Recognition at a low (Profile 4), moderate (Profile 2), moderately high (Profile 3) or at a high level (Profile 1), and these levels of LEB were strongly aligned with the levels of BE observed in these profiles. Still, when we look at differences among specific BE dimensions, results also reveal some interesting differences.

Although high and low levels of LEB (Profiles 1 and 4) clearly relate to high and low levels across all BE dimensions, results for moderate levels are not as clear. Employees corresponding to Profile 2, who have a moderate perception of LEB, present a BE profile mainly focused on task-related efficacy and improvement. In contrast, employees corresponding to Profile 3, who have a perception of LEB that is only slightly higher (moderately-high), present a BE profile mainly focused on group collaboration and improvement, as well as organizational involvement. These results suggest that in context of moderate levels of LEB, other personal or contextual variables might intervene to influence the specific forms and levels of BE. For instance, Profile 3 is characterized by a higher level of education than the other profiles, which may explain some differences between Profiles 2 and 3. Indeed, more educated people tend to value social and altruistic objectives (i.e., helping others) more than their less educated counterparts (Johnson and Elder, 2002).

The differing outcomes of Profile 2 and 3 offer a vivid representation of the mixed effects of LEB found in the literature (Sharma & Kirkman, 2015). It can be hypothesized, as proposed by Humborstad et al. (2013), that those moderate levels of coherent LEB may potentially expose employees to ambiguous empowerment conditions, leading them to focus on only some specific facets of BE, an effect that may differ according to employees' levels of education or contextual work features.

Positive and Negative Consequences of LEB Incoherence

The second aspect of Lawler's (1992) theoretical proposition states that an incoherent use of LEB would be ineffective or have deleterious consequences for employees' BE. Our specific findings regarding the effects of an incoherent use of specific LEB dimensions were mixed, therefore refuting Lawler's claim. However, these are highly relevant for managerial theory and practice.

First, an incoherent use of higher levels Delegation appears to have positive effects on BE. These results thus fail to support Lawler's (1992) hypothesis. In fact, our results show that within-profile deviations in terms of using Delegation to a greater extent than that of any other LEB dimensions is systematically related to increases in the efficacy with which employees complete their job-related tasks. This relation even seems to increase as a function of the desirability of the profiles. Therefore, a stronger use of Delegation in comparison to other LEB (Coaching and Recognition) does not seem to generate helplessness or to decrease motivation. In practice, this finding suggests that managers should be informed that there are no real limitations to the benefits of Delegation. However, the results found in this study are bound within four profiles relatively homogeneous in levels of LEB. A more nuanced proposition would be that increasing Delegation over other LEB seems to be particularly desirable for employees in the optimal empowerment profile, within which all LEB are high.

Results regarding incoherence in Coaching (i.e., providing information, new skills and knowledge) are mixed. Incoherence is both associated with positive and negative effects among the distinct profiles. On the one hand, within-profile deviations in Coaching appear to be beneficial for highly empowered employees (Profile 1), for whom they are associated with higher levels of improvements in job-related tasks. Similarly, within-profile variations in Coaching seem even more beneficent for the least empowered (Profile 4), for whom they are related to higher levels of both efficacy and improvement in the realization of job-related tasks. On the other hand, for employees presenting a moderate level of empowerment (Profile 3), an incoherent managerial focus on Coaching relative to the other LEB dimensions appears to be related to lower levels of efficacy in task. Our results in terms of Coaching are aligned with the paradoxical results in literature and show there might be limits to the benefits of Coaching among moderately empowered employees, particularly when Coaching breaks the balance among various facets of LEB. Future research should devote more attention to understanding the exact mechanisms of action underlying these relations.

Finally, results regarding Recognition (i.e., non-monetary rewards) are the only ones aligned with Lawler's proposition (1992), showing that in most situations, an incoherent focus on Recognition to the detriment of other facets of LEB carries a risk of decreasing levels of task-related efficacy for employees corresponding to Profiles 1 (*Optimal*) and 4 (*Non-Empowered*), and levels of task-related

improvement and organizational involvement for *Moderately-Empowered Task-Focused* employees (Profile 2). Once again, many mechanisms may explain these relations, and would need to be more carefully investigated in the context of future studies. Generally, research shows that the efficacy of Recognition appears to be conditional on fairness (de Cremer et al., 2005). Thus, employees could possibly react negatively to an unearned or unfair Recognition. Interestingly, for employees corresponding to Profile 4, unbalanced levels of Recognition also appear to lead to higher levels of involvement at the organizational level, raising the possibility that this unbalance level of Recognition offered to non-empowered employees who do not perform so well in their task may target competencies not part of their routine job description (e.g., administrative skills, political skills).

Limitations and Direction Future Research

The conclusions from the current study must be interpreted with caution while keeping in mind a series of limitations. First, this study relied on a non-experimental cross-sectional design, which precludes any causal or directional interpretations. Even if prior studies have already longitudinally shown that several LEB are related to higher levels of performance (e.g., Logan & Ganster, 2007), new studies should specifically investigate if Delegation, Coaching, and Recognition lead to changes in levels of BE over time, using an analytical scheme similar to the one used in the current study.

Second, although we explored the relations among the extracted latent profiles and a series of demographic covariates, our ability to clearly delineate the nature of employees forming each profile was limited. Using a non-experimental research design, it is impossible to rule out the possibility that third variables may have influenced the results. Clearly, future studies should more thoroughly investigate the personal characteristics of the employees corresponding to each profile (e.g., personality and values; Houghton, Bonham, Neck & Singh, 2004; Raub & Robert, 2010) and the influence of these characteristics on the results, the possible work-related determinants of membership into each profile, and the extent to which the current results generalize to a new sample of employees.

Finally, we relied on employees' self-reports of LEB and BE, a legitimate approach when dealing with perceptions and hard to observe behaviors (e.g., Vandenberg, Lance & Taylor, 2004). Although LEB and BE were assessed by a common method, it has unlikely biased the results from multivariate analyses such as those used in the present study (for a demonstration, see Siemsen, Roth, & Oliveira, 2010). However, future studies should consider relying on external sources of measure to reduce social desirability associated to reporting own behaviours (this is less concern for subordinate reports of LEB; Bass & Avolio, 1994). Finally, multi-level approaches should be considered in future research. In this study, because it was impossible to clearly identify membership into specific organizations and work units, it was not possible to systematically disentangle the multilevel nature of the observed effects (e.g., Marsh et al., 2012; Morin, Marsh, Nagengast & Scalas, 2014).

Practical Implications

From a practical standpoint, our results suggest that immediate supervisors should always try to implement a coherent configuration of LEB at a high level, which provides the four basic conditions of empowerment proposed by Lawler (1992) to employees. It is crucial to warn immediate supervisors that the incoherent implementation of LEB may sometimes have a negative impact on employees. For instance, depending on the level to which each LEB is implemented, incoherence regarding rewards through Recognition is to be avoided, and care should be taken to refrain from offering an unbalanced level of Coaching to otherwise moderately-empowered employees. In contrast, there does not seem to be any limit to the benefits of Delegation, an issue that might need to be further explored in different samples of employees working in conditions typically characterized by very high levels of autonomy (marketing professionals, professors, etc.).

Conclusion

A key implication of this study is the demonstration that the complementariness and coherence of LEB both represent important aspects to consider in the prediction of behavioral manifestations of empowerment. More precisely, an optimal set of LEB would involve a coherent configuration of empowering leadership practices implemented at a high level. In contrast, incoherence among LEB, reflecting the promotion of one practice over the others, could either have a positive, a negative or no effect on employees' BE depending on the specific LEB dimension that is considered, and the type of employees' profile. Essentially managers should be particularly careful to ensure that Recognition remains well-balanced with the other facets of LEB, and to refrain from providing unbalanced levels of Coaching to moderately empowered employees. Still, only positive effects appeared to be

associated with unidirectional increases in Delegation, suggesting that it should possibly represent a key component of LEB interventions.

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Tables and Figures

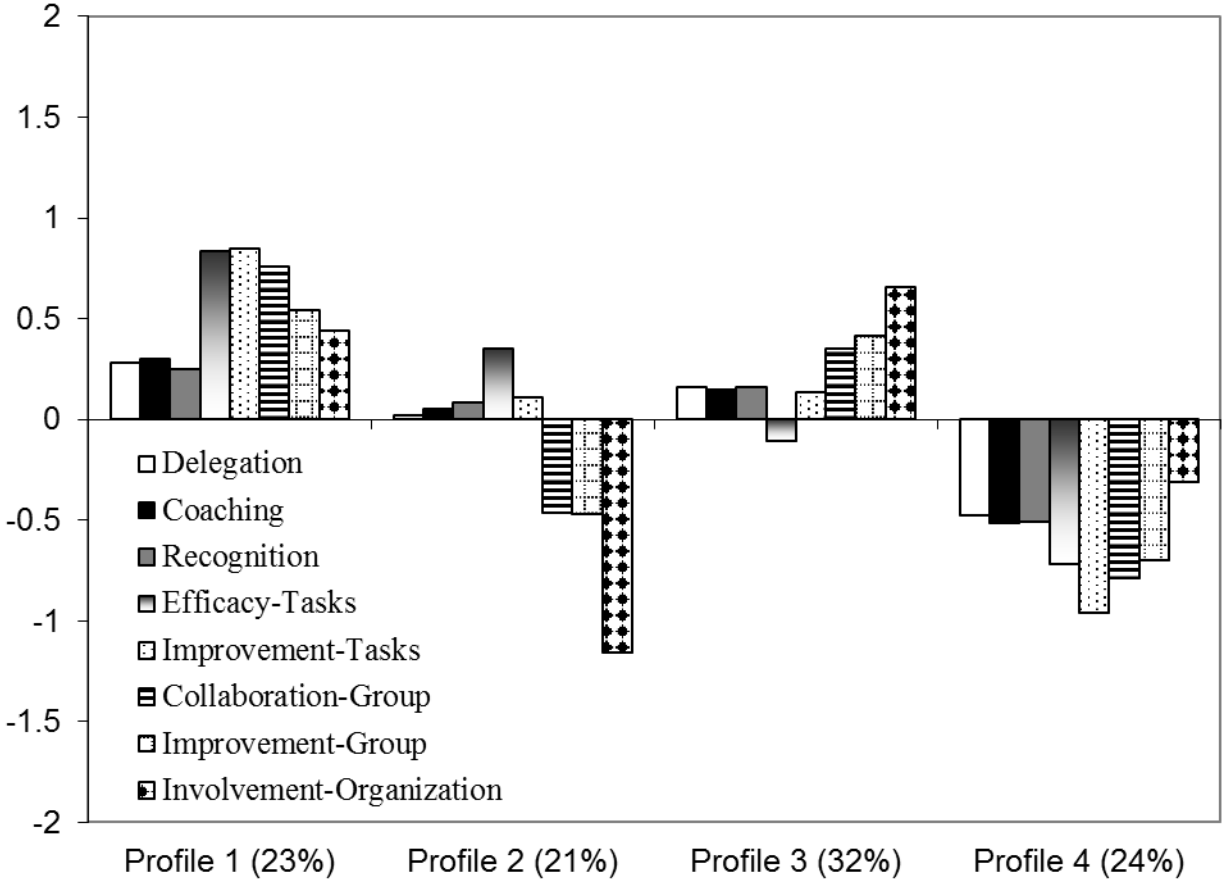

Figure 1. Profiles of leadership empowerment behaviors and behavioral empowerment (N = 474).

Table 1

Latent Variable Correlations and Composite Reliability from the Preliminary Measurement Model

Factor	1.	2.	3.	4.	5.	6.	7.	8.
1. Delegation	**.82**							
2. Coaching	.45**	**.85**						
3. Recognition	.44**	.51**	**.86**					
4. Efficacy-Tasks	.32**	.27**	.19**	**.86**				
5. Improvement-Tasks	.16**	.30**	.17**	.47**	**.81**			
6. Collaboration-Group	.20**	.12	.17**	.21**	.29**	**.79**		
7. Improvement-Group	.05	.08	.09	.08**	.29**	.41**	**.84**	
8. Involvement-Org.	.17**	.14**	.14**	.01	.17**	.32**	.31**	**.86**

N=474; **p≤.01. Composite reliability coefficients are reported in the diagonal (italicized) and were computed from the standardized parameter estimates, using McDonald's (1970) omega coefficient: $\omega = (\Sigma|\lambda i|)^2 / ([\Sigma|\lambda i|]^2 + \Sigma\delta ii)$ where λi are the factor loadings and δii, the error variances.

Table 2

Mixture Regression Models

Model	LogLikelihood	Free parameters	Scaling	AIC	CAIC	BIC	ABIC	ICL-BIC	Entropy	aLMR	BLRT
1 Class	-4101.66	44	1.26	8291.32	8518.42	8474.42	8334.77	Na	Na	Na	Na
2 Class	-3848.71	76	1.19	7849.43	8241.68	8165.68	7924.47	8027.03	0.79	≤ 0.01	≤ 0.01
3 Class	-3671.05	108	1.17	7558.10	8115.51	8007.51	7664.73	7866.91	0.87	≤ 0.01	≤ 0.01
4 Class	-3551.22	140	1.17	7382.44	8105.01	7965.01	7520.67	7823.07	0.89	0.19	≤ 0.01
5 Class	-3479.71	172	1.21	7303.42	8191.15	8019.15	7473.24	7808.59	0.86	0.39	≤ 0.01
6 Class	-3414.60	204	1.22	7237.20	8290.09	8086.09	7438.63	7889.05	0.88	0.49	≤ 0.01
7 Class	-3358.70	236	0.02	7189.40	8407.45	8171.45	7422.42	7966.69	0.89	0.24	≤ 0.01
8 Class	-3282.96	268	1.19	7101.92	8485.12	8217.12	7366.53	8016.05	0.90	0.50	≤ 0.01

N=474; Scaling = scaling factor associated with MLR loglikelihood estimates; AIC: Akaïke Information Criteria; CAIC: Constant AIC; BIC: Bayesian Information Criteria; ABIC: Sample-Size adjusted BIC; ICL-BIC: entropy-adjusted BIC; aLMR: Adjusted Lo-Mendell-Rubin likelihood ratio test BLRT: Bootstrap Likelihood ratio test.

Table 3

Relations between Intra-Profile Variations of Leadership Empowerment Behaviors and Behavioral Empowerment Dimensions

	Efficacy-Tasks		Improvement-Tasks		Collaboration-Group		Improvement-Group		Involvement-Org.	
Predictor	*b* (s.e)	β	*b* (s.e)	β	*b* (s.e)	β	*b* (s.e)	β	*b* (s.e)	β
Profile 1 (23%)										
Delegation	0.05 (0.01)**	.71	-0.08 (0.05)	-.27	0.04 (0.11)	.10	-0.10 (0.11)	-.12	0.131 (0.24)	.13
Coaching	0.01 (0.01)	.15	0.15 (0.07)*	.50	-0.05 (0.13)	-.11	0.10 (0.13)	.11	-0.057 (0.37)	-.05
Recognition	-0.02 (0.01)*	-.28	-0.03 (0.03)	-.11	0.04 (0.07)	.09	-0.03 (0.11)	-.04	0.100 (0.21)	.10
R^2	0.41		0.10		0.01		0.01		0.031	
Profile 2 (21%)										
Delegation	0.27 (0.13)*	.51	0.25 (0.19)	.34	0.37 (0.20)	.30	-0.13 (0.25)	-.10	0.09 (0.09)	.32
Coaching	-0.08 (0.12)	-.15	0.22 (0.20)	.31	-0.25 (0.18)	-.21	-0.21 (0.24)	-.17	0.06 (0.07)	.21
Recognition	-0.13 (0.13)	-.24	-0.37 (0.15)*	-.49	0.06 (0.21)	.05	0.21 (0.30)	.16	-0.14 (0.06)*	-.48
R^2	0.09		0.09		0.05		0.02		0.06	
Profile 3 (32%)										
Delegation	0.33 (0.11)**	.51	0.13 (0.08)	.28	0.10 (0.10)	.16	-0.11 (0.11)	-.17	0.19 (0.12)	.31
Coaching	-0.24 (0.09)**	-.37	0.01 (0.08)	.02	-0.06 (0.10)	-.10	0.03 (0.11)	.04	0.08 (0.11)	.13
Recognition	0.12 (0.08)	.20	0.02 (0.07)	.04	0.05 (0.10)	.08	0.14 (0.12)	.23	-0.09 (0.12)	-.15
R^2	0.19		0.11		0.03		0.03		0.09	
Profile 4 (24%)										
Delegation	0.36 (0.17)*	.31	-0.12 (0.18)	-.12	0.11 (0.12)	.15	-0.05 (0.12)	-.07	0.01 (0.10)	.02
Coaching	0.61 (0.18)**	.46	0.54 (0.21)**	.48	-0.23 (0.15)	-.27	-0.04 (0.16)	-.05	-0.12 (0.15)	-.15
Recognition	-0.47 (0.17)**	-.39	-0.23 (0.22)	-.22	0.13 (0.14)	.16	0.01 (0.18)	.01	0.22 (0.13)*	.30
R^2	0.24		0.10		0.04		.01		0.05	

N= 474; *: p≤.05; **: p≤.01; *b*: Unstandardized coefficient; s.e.: standard error; β: Standardized coefficient.

Table 4

Characteristics of the Mixture Regression Profiles on Covariates

	% (*N= 474*)		Profile 1 (23%)	Profile 2 (21%)	Profile 3 (32%)	Profile 4 (24%)	Summary of significance tests
% Males	59.9%		58.6%	55.5%	60.5%	63.9%	1 = 2 = 3 = 4 =5
% Regular Employees	96.4%		95.7%	97.4%	97.5%	94.7%	1 = 2 = 3 = 4 =5
	Mean	SD	Profile 1 (23%)	Profile 2 (21%)	Profile 3 (32%)	Profile 4 (24%)	Summary of significance tests
Age	2.50	1.24	3.12	2.46	2.39	2.10	4 < 2 = 3 < 1
Education	3.64	1.71	3.57	3.35	4.04	3.45	1 = 2 = 4 < 3
Tenure (Organization)	3.72	1.73	3.87	3.79	3.71	3.53	1 = 2 = 3 = 4 = 5
Weekly Work Hours	4.46	0.65	4.56	4.31	4.58	4.34	2 = 4 < 1 = 3
Size of Work Unit	2.78	1.72	2.82	2.64	2.88	2.74	1 = 2 = 3 = 4 = 5

ONLINE SUPPLEMENTAL MATERIAL

Preliminary Measurement Models

Preliminary measurement models were estimated using the Robust Maximum Likelihood estimator (MLR) implemented in Mplus 7.3 (Muthén & Muthén, 2014). The limited amount of missing data present at the item level (0% to 0.6%, mean = 0.1%) was handled with full estimation maximum likelihood (FIML) procedures (Enders, 2010). These models included a total of eight correlated a priori factors: Three representing LEB dimensions (i.e., Delegation, Coaching and Recognition) and five representing BE dimensions (i.e., Efficacy-Tasks, Improvement-Tasks, Collaboration-Group, Improvement-Group, and Involvement-Organization). This model was estimated twice, once using a classical confirmatory factor analytic (CFA) model assuming that each factor would be defined only by its a priori indicators with no cross loadings or correlated uniquenesses, and allowed to correlate to one another, and once using newly developed exploratory structural equation modeling (ESEM; Asparouhov & Muthén, 2009; Marsh et al., 2009; Morin, Marsh, & Nagengast, 2013). In the ESEM models, two separate sets of ESEM factors were estimated (one for LEB, and one for BE), allowing for the free estimations of cross-loadings between items and non-target factors within each set, but forcing all cross loadings to be zero across sets of ESEM factors representing the predictors and the outcomes of our predictive models to be estimated later. These ESEM models were estimated using a confirmatory approach to the rotation of factor solutions, using oblique target rotation (Asparouhov & Muthén, 2009; Browne, 2001). Target rotation allows for the pre-specification of target loadings in a confirmatory manner, while cross-loadings are targeted to be as close to zero as possible.

The decision to compare ESEM and CFA solutions is based on simulation studies (Asparouhov & Muthén, 2009; Sass & Schmitt, 2010; Schmitt & Sass, 2011) and studies of simulated data (Marsh, Lüdtke, Nagengast, Morin, & Von Davier, 2013; Morin, Arens, & Marsh, 2015) showing that forcing cross-loadings (even as small as .100, Marsh et al., 2013) present in the population model to be exactly zero according to typical CFA specification forces these cross loadings to be expressed through an inflation of the factor correlations. In contrast, these same studies show that the free estimation of cross-loadings, even when none are present in the population model, still provides unbiased estimates of the factor correlations (Asparouhov, Muthén, & Morin, 2015; Morin, Arens et al., 2015).

Given the known oversensitivity of the chi-square test of exact fit (χ^2) to sample size and minor model misspecifications (e.g., Marsh, Hau, & Grayson, 2005), we relied on goodness-of-fit indices to describe the fit of the alternative models (Hu & Bentler, 1999): the comparative fit index (CFI), the Tucker-Lewis index (TLI), as well as the root mean square error of approximation (RMSEA) and its 90% confidence interval. Values greater than .90 for the CFI and TLI indicate adequate model fit, although values greater than .95 are preferable. Values smaller than .08 or .06 for the RMSEA respectively support acceptable and excellent model fit. Like the chi-square, chi-square difference tests present a known sensitivity to sample size and minor model misspecifications so that recent studies suggest complementing this information with changes in CFIs and RMSEAs (Chen, 2007; Cheung & Rensvold, 2002) in the context of nested model comparisons. A ΔCFI of .01 or less and a ΔRMSEA of .02 or less indicate that the most restricted model should be rejected in favor of the less restrictive one.

The results from these two models are reported in supplementary Table S1. Although both models appear to fit the data reasonably well, the fit of the ESEM model shows a clear improvement over that of the CFA model based on both the ΔCFI (.02) and ΔTLI (.02). However, as recommended in the ESEM literature (Marsh et al., 2009; Morin, Arens et al., 2015; Morin et al., 2013), model selection should never be solely based on goodness-of-fit indices (also see Marsh et al., 2005). The parameter estimates for both models are reported in Table S2, S3, and S4 of these online supplements. Both solutions revealed factors that are well-defined by their a priori items, as evidenced by both high factor loadings (CFA: λ = .68 to .96; M_λ = .80; ESEM: λ = .47 to .94; M_λ = .68), and satisfactory estimates of model-based composite reliability (CFA: ω = .83 to .92; M_ω = .87; ESEM: ω = .79 to .86; M_ω = .84). Furthermore, the ESEM solution resulted in relatively low estimates of non-target cross-loadings in general ($|\lambda|$ = .00 to .34; $M_{|\lambda|}$ = .09), ensuring that all factors remains fully interpretable. The critical difference between both models lies in the size of the factor correlations estimated among all factors forming a single set of factors, which appears to be much reduced in the ESEM solution (LEB: r = .44 to .51; M_r = .47 BE: r = .01 to .47; M_r = .26) when compared to the CFA solution which

would be likely to generate problems of multicollinearity if retained for further analyses (LEB: r = .74 to .80; M_r = .76; BE: r = .11 to .72; M_r = .47). Based on the aforementioned evidence from statistical research (e.g., Asparouhov et al., 2015), this clearly suggests the added value of retaining the ESEM solution as the final model.

Importantly, the factor correlations observed in both models clearly support the presence of significant and positive associations between each of the LEB dimensions and each of the BE dimensions. Using factor scores saved from the retained ESEM model (see discussion of the advantages of factor scores below), we further investigated these relations through the estimation of path analytic regression models. In the first set of model, we used a single predictor (dimension of LEB) at a time to predict scores on BE dimensions. Then, we estimated a multivariate regression model simultaneously considering all LEB dimensions in a single model. The results from these two models are reported in Table S5 of these online supplements. The results from the first set of analyses clearly support the presence of significant and positive relations between each of the LEB dimensions and each of the BE dimensions. The second models further shows that, once covariation among dimensions of LEB are controlled for in a multivariate model, Delegation and Coaching apparently represent the key predictors of Efficacy-Tasks, Coaching seems to represent the key predictor of Improvement-Tasks, Delegation seems to represent the key predictor of Collaboration-Group and Involvement-Org, while Recognition failed to be uniquely related to any of the outcomes, and no dimension of LEB seemed to be uniquely related to Improvement-Group. However, as noted in the main manuscript, a key limitation of these analyses is that they provide no information regarding: (a) the effect of the overall level of LEB on BE dimensions; (b) the effect of coherence (or lack thereof) among LEB on BE dimensions.

Factor scores (estimated with a mean of 0 and a SD of 1) from the final ESEM model were saved and used as input for the main mixture regression analyses (e.g., Morin, 2016). An annotated input for the mixture regression analyses is presented in Appendix S1. Mixture models (including mixture regression models) are usually estimated using scale scores (sum, or mean). Although it is well known that using latent variables controlled for measurement error (i.e., models where the items are used to estimate latent factors, which are then used as profile indicators) provides a stronger approach than the use of scale scores, applications of fully-latent mixture models are few (e.g., Morin, Scalas, & Marsh,, 2015). Given the complexity of mixture models, a fully-latent approach is often impossible to implement. An alternative is to use factor scores from preliminary measurement models (e.g., Kam, Morin, Meyer, & Topolnytsky, 2016; Morin & Wang, 2016). Although factor scores do not explicitly control for measurement errors as well as latent variables they still provide a partial implicit control for measurement errors by giving more weight to more reliable items (Skrondal & Laake, 2001). A key advantage of factors scores is that they tend to preserve the nature of the underlying measurement model when they are based on more complex measurement models such as the ESEM model used in the current study.

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Table S1

Goodness-of-fit Statistics of the Confirmatory Factor Analytic (CFA) and Exploratory Structural Equation Models (ESEM)

Model	χ^2 (df)	CFI	TLI	RMSEA	90% CI	$\Delta S\chi^2$ (df)	ΔCFI	ΔTLI	ΔRMSEA
CFA	675.84 (35)**	.95	.94	.04	.04-.05	-	-	-	-
ESEM	458.53 (29)**	.97	.96	.04	.03-.04	201.94 (62)**	+.02	+.02	-.01

Note. χ^2: chi-square test of model fit; df : degrees of freedom; CFI : comparative fit index; TLI : Tucker-Lewis index; RMSEA : root mean square error of approximation; 90% CI : 90% confidence interval of the RMSEA; $\Delta S\chi^2$: scaled chi-square difference tests (calculated from models log likelihoods for greater precision); ΔCFI : change in CFI; ΔTLI : change in TLI; ΔRMSEA : change in RMSEA; *p<.01.

Table S2

Standardized Results from the Confirmatory Factor Analyses (CFA) and Exploratory Structural Equation Models (ESEM)

	CFA									ESEM								
Items	DEL(λ)	COA(λ)	RE(λ)	EFF(λ)	IT(λ)	COL(λ)	IG(λ)	IO(λ)	δ	DEL(λ)	COA(λ)	RE(λ)	EFF(λ)	IT(λ)	COL(λ)	IG(λ)	IO(λ)	δ
DEL1	**.72**								.48	**.66**	.19	.01						.46
DEL2	**.74**								.45	**.47**	.34	.09						.49
DEL3	**.76**								.43	**.78**	-.03	.09						.36
DEL4	**.77**								.41	**.68**	.10	.10						.45
DEL5	**.84**								.30	**.63**	.13	.20						.41
COA1		**.68**							.55	.14	**.65**	-.02						.35
COA2		**.79**							.38	.13	**.54**	.25						.29
COA3		**.81**							.34	.10	**.66**	.15						.36
COA4		**.74**							.45	-.01	**.72**	.10						.22
RE1			**.81**						.35	.11	.23	**.60**						.39
RE2			**.84**						.30	.20	.06	**.70**						.39
RE3			**.87**						.25	.13	.05	**.79**						.41
RE4			**.77**						.40	.18	.30	**.47**						.24
RE5			**.86**						.26	.01	.17	**.77**						.33
EFF1				**.78**					.39				**.80**	.00	.07	.00	.03	.34
EFF2				**.88**					.23				**.77**	.18	-.02	.06	-.02	.23
EFF3				**.84**					.29				**.69**	.21	.11	-.08	-.02	.30
IT1					**.78**				.40				.21	**.59**	.01	.13	.02	.41
IT2					**.82**				.33				.03	**.81**	.08	.03	.02	.25
IT3					**.84**				.30				.17	**.65**	.09	.07	.07	.33
COL1						**.75**			.44				.13	.03	**.49**	.30	.05	.46
COL 2						**.81**			.34				-.01	.07	**.78**	.02	.14	.26
COL 3						**.79**			.37				.07	.06	**.72**	.12	-.01	.35
IG1							**.70**		.52				-.04	.01	.08	**.62**	.10	.51
IG2							**.84**		.20				.01	.10	.16	**.72**	.11	.23
IG3							**.92**		.16				.01	.12	.13	**.80**	.08	.13
IO1								**.72**	.49				-.04	.05	.18	-.10	**.67**	.47
IO2								**.96**	.08				.01	.01	.06	.07	**.94**	.03
IO3								**.82**	.33				.01	.06	.01	.25	**.68**	.33
ω	.88	.84	.98	.87	.85	.83	.87	.87		.82	.85	.86	.86	.81	.79	.84	.86	

Note. λ: Loadings; δ: Uniquenesses; DEL: Delegation; COA: Coaching; RE: Recognition; EFF: Efficacy-Tasks; IT: Improvement-Tasks; COL: Collaboration-Group; IG: Improvement-Group; IO: Involvement-Organization; Bold: Target loadings; ω: composite reliability coefficients computed from the standardized parameter estimates, using McDonald's (1970) omega coefficient: $\omega = (\Sigma|\lambda i|)^2 / ([\Sigma|\lambda i|]^2 + \Sigma\delta ii)$ where λi are the factor loadings and δii, the error variances.

Table S3

Factor Correlations from the CFA and ESEM solutions

Factor	Delegation	Coaching	Recognition	Efficacy-Tasks	Improvement-Tasks	Collaboration-Group	Improvement-Group	Involvement-Org.
Delegation		.74**	.74**	.34**	.26**	.24**	.13*	.20**
Coaching	.45**		.80**	.34**	.32**	.18**	.18**	.19**
Recognition	.44**	.51**		.27**	.24**	.22**	.15**	.18**
Efficacy-Tasks	.32**	.27**	.19**		.72**	.38**	.25**	.11*
Improvement-Tasks	.16**	.30**	.17**	.47**		.54**	.53**	.33**
Collaboration-Group	.20**	.11	.17**	.21**	.29**		.72**	.54**
Improvement-Group	.05	.08	.09	.08**	.29**	.41**		.55**
Involvement-Org.	.17**	.14**	.14**	.01	.17**	.32**	.31**	

Note. *p≤.05; **p≤.01. CFA factor correlations are reported above the diagonal, ESEM factor correlations are reported under the diagonal; DEL: Delegation; COA: Coaching; RE: Recognition; EFF: Efficacy-Tasks; IT: Improvement-Tasks; COL: Collaboration-Group; IG: Improvement-Group; IO: Involvement-Organization.

Table S4

Results from the Path Analytic Regression Models Estimated on the Total Sample.

	Efficacy-Tasks		Improvement-Tasks		Collaboration-Group		Improvement-Group		Involvement-Organization	
Predictor	*b* (s.e)	β	*b* (s.e)	β	*b* (s.e)	β	*b* (s.e)	β	*b* (s.e)	β
Models including a single predictor at a time (and all outcomes)										
Delegation	0.38 (0.06)**	.38	0.28 (0.05)**	.28	0.26 (0.05)**	.27	0.10 (0.05)*	.10	0.22 (0.05)**	.21
Coaching	0.35 (0.05)**	.35	0.37 (0.05)**	.36	0.20 (0.05)**	.20	0.13 (0.05)**	.12	0.20 (0.05)**	.17
Recognition	0.28 (0.04)**	.29	0.26 (0.04)**	.27	0.23 (0.04)**	.24	0.13 (0.05)**	.13	0.19 (0.05)**	.19
Model including all predictors (and all outcomes)										
Delegation	0.31 (0.09)**	.31	0.06 (0.09)	.06	0.21 (0.08)**	.21	-0.01 (0.08)	-.01	0.15 (0.08)*	.15
Coaching	0.20 (0.09)*	.20	0.37 (0.09)**	.37	-0.03 (0.08)	-.03	0.07 (0.09)	.07	0.05 (0.08)	.04
Recognition	-0.10 (0.08)	-.11	-0.07 (0.09)	-.07	0.10(0.08)	.10	0.08 (0.08)	.08	0.05 (0.08)	.05

Note. *b*: Unstandardized coefficient; s.e.: standard error of the coefficient; β: Standardized coefficient; *: p≤.05; **: p≤.01.

Table S5

Within-Profile Means and Variances of LEB and BE Dimensions

	Profile 1		Profile 2		Profile 3		Profile 4	
Means [CI]								
Delegation	0.28	[0.09; 0.47]	0.02	[-0.17; 0.22]	0.16	[-0.02; 0.33]	-0.48	[-0.74; -0.22]
Coaching	0.30	[0.07; 0.53]	0.05	[-0.17; 0.28]	0.15	[-0.02; 0.32]	-0.51	[-0.76; -0.27]
Recognition	0.25	[0.06; 0.44]	0.08	[-0.13; 0.30]	0.16	[-0.06; 0.38]	-0.51	[-0.81; -0.21]
Efficacy-Tasks	0.83	[0.82; 0.84]	0.35	[0.21; 0.50]	-0.11	[-0.25; 0.03]	-0.72	[-0.99; -0.45]
Improvement-Tasks	0.85	[0.78; 0.91]	0.11	[-0.09; 0.30]	0.13	[0.03; 0.23]	-0.96	[-1.36; -0.56]
Collaboration-Group	0.76	[0.64; 0.87]	-0.46	[-0.69; -0.23]	0.35	[0.24; 0.47]	-0.79	[-1.12; -0.45]
Improvement-Group	0.54	[0.40; 0.68]	-0.47	[-0.73; -0.21]	0.42	[0.26; 0.57]	-0.70	[-0.95; -0.45]
Involvement-Org.	0.44	[0.17; 0.72]	-1.16	[-1.26; -1.05]	0.65	[0.51; 0.80]	-0.31	[-0.54; -0.08]
Standard Deviation [CI]								
Delegation	0.91	[0.80; 1.01]	0.86	[0.78; 0.94]	0.843	[0.76; 0.92]	1.00	[0.89; 1.09]
Coaching	0.86	[0.71; 0.99]	0.91	[0.80; 1.00]	0.856	[0.78; 0.92]	0.89	[0.81; 0.97]
Recognition	0.94	[0.85; 1.03]	0.85	[0.75; 0.95]	0.908	[0.81; 1.00]	0.96	[0.88; 1.04]
Efficacy-Tasks	0.05	[0.03; 0.06]	0.44	[0.33; 0.53]	0.494	[0.41; 0.57]	1.01	[0.88; 1.19]
Improvement-Tasks	0.24	[0.18; 0.29]	0.61	[0.48; 0.72]	0.377	[0.33; 0.42]	0.96	[0.80; 1.10]
Collaboration-Group	0.41	[0.33; 0.47]	1.03	[0.78; 1.23]	0.495	[0.43; 0.56]	0.74	[0.66; 0.81]
Improvement-Group	0.71	[0.57; 0.83]	1.12	[0.96; 1.26]	0.531	[0.40; 0.64]	0.78	[0.70; 0.85]
Involvement-Org.	0.91	[0.81; 1.00]	0.24	[0.09; 0.33]	0.496	[0.43; 0.56]	0.69	[0.62; 0.75]

Note. CI = 95% confidence interval.

Mplus Input for the Mixture Regression Analysis for the Final 4-Profile Solution

```
! Text appearing in greyscale italics after "!" are annotations.
DATA:
FILE IS data.dat; ! To indicate the name of the data set
VARIABLE:
! NAMES lists all variables in the data set and USEVARIABLE list those used in the model
NAMES ARE sex status age edu tenure week_h size_un CONSC AMELT COLL AMELG IMPL
DELEG COACH  RECON;
USEVARIABLE ARE CONSC AMELT COLL  AMELG  IMPL DELEG COACH  RECON;
MISSING ARE ALL (-999); ! indicate the code used for missing data.
Auxiliary = sexe (e) status (e) age (e) edu (e) tenure (e)
week_h (e) size_un (e);! to request mean comparisons between latent profiles on the covariates.
classes = c(4); !number of class specification

ANALYSIS:
  TYPE = MIXTURE; ! To request a mixture (person-centered model)
  ESTIMATOR = MLR; ! To request robust maximum likelihood estimation
  PROCESS = 3; ! To request the estimation to use 3 processors.
  STARTS = 10000 500; ! To request 10000 random starts, with the best 500 for final optimization
  STITERATIONS = 1000; ! To request 1000 iterations
  LRTBOOTSTRAP = 100; LRTSTARTS = 10 5 80 20; !starts function for the BLRT and ALMR

  MODEL:
! The %OVERALL% section describes the general model, whereas the class-specific sections
! (%c#1% to %c#4%) describe the parameter to be freely estimated across classes.
  %OVERALL%
! The following (using ON) describes the regression
  CONSC AMELT COLL  AMELG  IMPL ON DELEG COACH  RECON ;
! The following describes the variances of the predictors and residuals of the outcomes
  CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON;
! The following describes the means of the predictors and the intercepts of the outcomes
[CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON];
! All parameters are freely estimated in all classes.
  %c#1%
  CONSC AMELT COLL  AMELG  IMPL ON DELEG COACH  RECON ;
  CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON;
  [CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON];
  %c#2%
  CONSC AMELT COLL  AMELG  IMPL ON DELEG COACH  RECON ;
  CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON;
  [CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON];
  %c#3%
  CONSC AMELT COLL  AMELG  IMPL ON DELEG COACH  RECON ;
  CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON;
  [CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON];
  %c#4%
  CONSC AMELT COLL  AMELG  IMPL ON DELEG COACH  RECON ;
  CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON;
  [CONSC AMELT COLL  AMELG  IMPL  DELEG COACH  RECON];

  OUTPUT: ! To request specific output sections (TECH 11 and 14 are for the ALMR and BLRT)
  STDYX SAMPSTAT CINTERVAL SVALUES RESIDUAL TECH1 TECH7 TECH11 TECH14;
  SAVEDATA: ! To save the class probabilities and most likely class assignment.
  FILE IS Mix_EMP.dat;
FORMAT IS FREE; SAVE=CPROBABILITIES;
```