

**PROFILING AFFECTIVE-IDENTITY MOTIVATION TO LEAD  
DURING TWO YEARS: ASSOCIATIONS WITH READINESS TO  
LEAD**

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The aim of this study was to profile the development of affective-identity motivation to lead (AI-MTL) among Finnish highly educated professionals. In addition, differences between these profiles were investigated regarding occupation of leadership positions during the follow-up, leader-supportive organizational climate, and occupational well-being. This study was part of the MOTILEAD-project implemented in the Department of Psychology in University of Jyväskylä and the longitudinal data was collected in 2017 and 2019. Our sample consisted of those professionals who were not leaders at the study baseline ( $n = 372$ ). During the follow-up, part of them (17%) occupied a leadership position. The results indicated AI-MTL to appear quite stable across two time points as we identified three stable latent profiles: *Low-Stable AI-MTL* (25%), *Moderate-Stable AI-MTL* (55%), and *High-Stable AI-MTL* (20%). Professionals with low AI-MTL were less likely to occupy leadership positions during the follow-up. Regarding leader-supportive organizational climate and occupational well-being, expected differences between the profiles were not found. Overall, we propose that AI-MTL could be considered as a personal resource promoting the readiness to lead, at least, when deciding on whether to occupy leadership positions. Thus, AI-MTL should be regarded by HRM practitioners, especially, when readiness to lead is expected from candidates in the near future. In addition, to reinforce recognition and development of one's motivation to lead, organizations are recommended to offer opportunities to accumulate leadership-related experience.

Key words: affective-identity motivation to lead, leader-supportive organizational climate, occupational well-being, sustainable careers, resources, readiness to lead, person-centered research

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Tämän tutkimuksen tarkoituksena oli profiloida identiteettipohjaisen johtamismotivaation kehitystä suomalaisilla korkeasti koulutetuilla asiantuntijoilla. Lisäksi tutkittiin sitä, kuinka nämä profiilit eroavat seurannan aikaisen johtotehtäviin siirtymisen, johtajuutta tukevan organisaatioilmapiirin sekä työhyvinvoinnin suhteen. Tutkimus oli osa Jyväskylän yliopiston Psykologian laitoksella toteutettua MOTILEAD-projektia, jonka pitkäaikaisaineisto kerättiin vuosina 2017 ja 2019. Tämä otos koostui niistä asiantuntijoista, jotka eivät tutkimuksen lähtötilanteessa olleet johtotehtävissä ( $n = 372$ ). Seurannan aikana osa heistä (17 %) siirtyi johtotehtäviin. Tulokset osoittivat identiteettipohjaisen johtamismotivaation olevan melko pysyvää, sillä latentin profiilianalyysin avulla voitiin identifioida kolme eri tasoista johtamismotivaatioprofiilia: *Pysyvä matala* (25 %), *Pysyvä keskitasoinen* (55 %) sekä *Pysyvä korkea* (20 %). Matalan identiteettipohjaisen johtamismotivaation profiilin omaavat asiantuntijat siirtyivät seurannan aikana epätodennäköisemmin johtotehtäviin. Odotettuja eroja profiilien välillä ei havaittu johtajuutta tukevan organisaatioilmapiirin ja työhyvinvoinnin suhteen. Tulokset osoittavat identiteettipohjaisen johtamismotivaation olevan johtajuusvalmiutta edistävä yksilöllinen voimavara – ainakin tilanteessa, jossa asiantuntija päättää johtotehtävään hakeutumisesta. Henkilöstöhallinnon tulisikin huomioida identiteettipohjainen johtamismotivaatio erityisesti silloin, jos tehtävään hakijalta odotetaan lähitulevaisuudessa valmiutta johtaa. Lisäksi suositellaan, että organisaatiot mahdollistavat erilaisia johtajuuteen liittyviä kokemuksia, jotka auttavat tunnistamaan ja kehittämään yksilön henkilökohtaista motivaatiota johtaa.

Avainsanat: identiteettipohjainen johtamismotivaatio, johtajuutta tukeva organisaatioilmapiiri, työhyvinvointi, kestävät työurat, voimavarat, johtamisvalmius, henkilökeskeinen tutkimus

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# 1 INTRODUCTION

People experience various changes over their career, such as accumulation and loss of resources, acceptance of new positions, and changes in occupational motivation. A person both adapts to change and proactively shapes their career as an agent aiming at the sustainability of their career (De Vos, Van der Heijden, & Akkermans, 2020). When career choices are made in accordance with personal values, the person has an adequate person-career fit and, thus, the career is considered as more sustainable (De Vos et al., 2020). Moreover, a sustainable career encompasses a process in which personal resources are maintained and created over time (De Vos et al., 2020). Interestingly, the number of resources does not determine one's possibility to thrive: Instead, it is the capability to allocate resources sustainably, hence maximizing the fit between oneself and the environment (Hobfoll, 1989; Kaplan & Gangestad, 2007). The importance of a resource, and the necessity of it, varies across different contexts (Diener & Fujita, 1995; Halbesleben et al., 2014). For example, when the goal is to attain a sustainable career as a leader, motivation to lead could function as a valuable personal resource (Auvinen, Huhtala, Kinnunen, Tsupari, & Feldt, 2020).

Thus far, the knowledge regarding the development of motivation to lead is minor since the longitudinal research of this subject is scarce. The present longitudinal study aims to fill this research gap by profiling development of affective-identity motivation to lead over time among Finnish highly educated professionals. This person-centred approach complements the variable-oriented research as more diverse and more detailed information can be gained (e.g. Bergman & Magnusson, 1997; Von Eye, 2010). Thus, it offers a valuable approach for this study to describe the developmental trajectories of affective-identity motivation to lead. Second aim is to investigate how the profiles of affective-identity motivation to lead differ regarding occupation of a leadership position during the follow-up. Third aim, relevant for leaders-to-be, is to discover potential resources which would enhance the readiness to occupy a leadership position in the future, or more broadly, the readiness to lead. Here, by leaders-to-be we refer to those who occupy a leadership position already during the follow-up but also to those who have a potential to become leaders after the follow-up. Two potential resources are under investigation: affective-identity motivation to lead and leader-supportive organizational climate, the latter of which has attained no research interest. We assume that the existence of leader-supportive organizational climate might enhance the development of affective-identity

motivation to lead, which again could lead to occupational well-being among leaders, along with other plausible outcomes indicating sustainable careers. Overall, our purpose is to advance the understanding of the development of affective-identity motivation to lead as we assume it to be a valuable resource for those professionals who will work as leaders at some point of their career.

### **1.1 The multifaceted connections of affective-identity MTL to sustainable careers**

Motivation to Lead (MTL; Chan & Drasgow, 2001) can be defined as “an individual-differences construct that affects a leader's or a leader-to-be's decisions to assume leadership training, roles, and responsibilities” (p. 482). MTL is known for its key assumption that motivation to lead is both stable and dynamic, as it is affected, for example, by relatively stable personality traits as well as by social-learning processes and experience (Chan & Drasgow, 2001). Chan and Drasgow (2001) divided the MTL construct into three dimensions: one leads out of joy (affective-identity; AI-MTL), another out of duty or responsibility (social-normative; SN-MTL), and the third because one does not calculate the costs and benefits regarding the leadership position (non-calculative; NC-MTL). In this present study, we are focused on investigating the affective-identity dimension of MTL. According to a recent meta-analysis (Badura, Grijalva, Galvin, Owens, & Joseph, 2020), all three dimensions predicted leader emergence and transformational leadership, including lesser laissez-faire leadership. However, AI-MTL has, to some extent, a greater predictive power for leader outcomes when compared to the other dimensions of MTL (Badura et al., 2020). Hence, Badura et al. (2020) has stated that in some cases it is appropriate to focus solely on AI-MTL.

According to Chan and Drasgow (2001), AI-MTL refers to perceiving oneself contributing more in a position of a leader compared to a position of a follower. A leader with affective-identity motivation to lead has a genuine interest in leadership and experiences an intrinsic will, even a need, to lead (Chan & Drasgow, 2001). Extraversion, individualism, past leadership experience, and self-efficacy towards leadership represent the common antecedents to AI-MTL (Badura et al., 2020; Chan & Drasgow, 2001). Additionally, AI-MTL has been linked to a higher agentic orientation compared to other MTL types (Badura et al., 2020). Although the weight is on intrinsic motivation and natural, personality-related need to lead,

Chan and Drasgow (2001) emphasize that MTL is not assumed to be an inborn quality. Instead, motivation to lead, including AI-MTL, can also be learned and reinforced, such as by supporting leadership self-efficacy via feedback in leadership training (Badura et al., 2020; Chan & Drasgow, 2001). The existing longitudinal studies considering stability and change of MTL suggest varying mean level changes in the three dimensions: In one study, AI-MTL increased along with other two dimensions (Keating, Rosch, & Burgoon, 2014) while in other studies AI-MTL remained quite stable (Collier & Rosch, 2016; Rosch, 2015; Rosch, Simonsen, & Velez, 2015). Noteworthy, this research is limited regarding the number of studies, the samples consisting mostly American students, the length of follow-up periods (max. one academic year), and the fact that those studies are based on certain leadership-related interventions (e.g. educational courses and team experiences). In the present study, the focus is on the stability and change of AI-MTL among professionals.

Various studies suggest the relevance of AI-MTL for leadership. For example, in a one-year follow-up, leadership training was suggested to be more effective for the leaders with affective-based motivation, (Stiehl, Felfe, Elprana, & Gatzka, 2015). In addition, AI-MTL has been associated with more effective leadership behaviour (Badura et al., 2020; Stiehl et al., 2015). Regarding leadership-related career plans, one cross-sectional study suggested that high AI-MTL increased the self-evaluated probability to pursue more demanding leadership positions, whereas for low AI-MTL the result was the opposite (Lehtiniemi, Nieminen, Auvinen, & Feldt, 2020). In another cross-sectional study, leaders were profiled regarding their MTL and the profiles in which AI-MTL occurred solely or jointly with socio-normative MTL, the likelihood of applying for more challenging leadership positions was higher (Auvinen et al., 2020). These profiles were also considered to represent good occupational well-being and, in general, low levels of AI-MTL in the profiles were shown in lowered follower satisfaction (Auvinen et al., 2020). Overall, AI-MTL seems to have multifaceted connections not only to leader emergence, leadership styles, the effectiveness of leadership training, effective leadership, and career intentions, but also to occupational well-being and follower satisfaction. Moreover, these plausible outcomes resulting from high enough AI-MTL could be considered as indicators of sustainable careers among leaders. In the following paragraphs we will consider whether contextual factors, namely leaders' social resources, would be associated with the development of AI-MTL.

## **1.2 Leader-supportive organizational climate as a possible contextual resource affecting the development of AI-MTL**

The research concerning leaders' social resources is scarce. Recent research focuses mainly on the perceived organizational support (POS) or the support that leaders provide to their followers (e.g. Chen & Chiu, 2008; Jones-Carmack, 2019; Lambert, Minor, Wells, & Hogan, 2016; Mäkikangas, Feldt, & Kinnunen, 2007; Nielsen, Christensen, Finne, & Knardahl, 2020). Thus, the research has not focused on acts of reinforcement received by leaders themselves. Likewise, contextual or social aspects related to MTL have attained minor research interest (Porter, Riesenmy, & Fields, 2016). Porter et al. (2016) investigated contextual factors of MTL among 210 participants working in different industries and attending a MBA degree program in the United States. The results of this cross-sectional study suggested that the perceived work environment may significantly determine motivation to become a leader in an organization. Contextual variables regarding MTL have also been investigated cross-sectionally by Jones-Carmack (2019) with a sample of 170 retail employees in the US. However, no association between perceived organizational support (POS) and AI-MTL was found although an association was found for POS and non-calculative MTL. In the following paragraph, the phenomenon of leaders' social resources will be clarified in terms of our research interests.

One perspective to approach social resources is organizational climate. Organizational climate can be defined as “the shared meaning organizational members attach to the events, policies, practices, and procedures they experience and the behaviour they see being rewarded, supported, and expected” (Ehrhart, Schneider, & Macey, 2014, p. 2). This concept has been studied, for example, in relation to job performance (Beus, Solomon, Taylor, & Esken, 2020) and employees' health (Loh, Idris, Dormann, & Muhamad, 2019). In addition, leadership can be discerned as one of the antecedents for organizational climate (Schneider, González-Romá, Ostroff, & West, 2017). It is noteworthy that the definition for leaders' social resources, particularly support, does not exist. Therefore, we derive the definition from the concept of ‘supportive organizational climate’ which is referred to as a generally supporting work environment also covering how the individual perceives the social support in their workplace (Mäkikangas et al., 2007). The novel concept of *leader-supportive organizational climate* is defined as an organization member's perception of the social support to leaders and the extent to which the leaders are appreciated and receive acknowledgement in the organization.



Next, we interpret AI-MTL literature in terms of the perspectives of social support introduced by Cohen, Underwood and Gottlieb (2000). The perspective of stress and coping suggests that social support buffers against the negative effects of stress, thus, fostering health (Cohen et al., 2000). In turn, the social-constructionist perspective emphasises the direct impact of social support, despite a current stressor, through promotion of self-regulation and self-esteem, whereas the relationship perspective suggests that the typically co-occurring health consequences of social support and relationship processes are inseparable (Cohen et al., 2000). Since social support can protect against negative effects of stressors, and presuming that leaders cope with prominent stressors ascribed to higher job-related demands (Li, Schaubroeck, Xie, & Keller, 2018; Skakon, Kristensen, Christensen, Lund, & Labriola, 2011), it might be assumed that whenever social resources are available, it would be more encouraging for a professional to identify oneself as a leader (AI-MTL). Likewise, it could be inferred that leaders' social resources, particularly through promotion of self-esteem, would enhance the development of AI-MTL as AI-MTL has been associated with leadership self-efficacy (Badura et al., 2020; Chan & Drasgow, 2001). On the other hand, the significance of social support (e.g. others opinion) might be minor since AI-MTL has been linked to intrinsic motivation towards leadership and greater agentic orientation (Badura et al., 2020).

Overall, the associations of MTL to the perceived work environment and perceived organizational support have been investigated in a couple of studies (Jones-Carmack, 2019; Porter et al., 2016). However, the research considering MTL and organizational climate is absent. It is worth studying organizational climate in the context of MTL, particularly leader-supportive organizational climate, as it might be substantial for the development of AI-MTL. The studies on organizational climate have focused mostly on outcomes (Ehrhart et al., 2014): similarly in this present study, we address leader-supportive organizational climate as an antecedent for the development of AI-MTL. Further, we consider it as a possible contextual resource affecting the development of AI-MTL, thus, fostering the leadership readiness and occupational well-being among leaders.

### **1.3 Occupational well-being as an indicator of sustainable careers**

We propose occupational well-being (burnout, work engagement) to function as an indicator of sustainable careers (De Vos et al., 2020). Burnout is defined as a psychological syndrome emerging as a response to prolonged, chronic work-related stressors (Maslach & Jackson, 1981; Maslach, Schaufeli, & Leiter, 2001). Burnout comprises exhaustion (feelings of strain and depletion of emotional and physical resources), cynicism (negative and distant attitude towards different aspects of the work), and reduced professional efficacy (feelings of lack of achievement, productivity, and competence on the job) (Maslach et al., 2001). In turn, work engagement can be defined as “a positive, fulfilling, work-related state of mind” (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). It includes vigor (investment of effort in one’s work, determination when hardships and energy while working), dedication (strong involvement and positive feelings towards work), and absorption (deep concentration and immersion in one’s work) (Schaufeli et al., 2002; Schaufeli, Bakker, & Salanova, 2006). Interestingly, a recent eight-year longitudinal study among Finnish white-collar professionals showed that especially high job demands were associated with exhaustion while low job resources with reduced professional efficacy and cynicism (Mäkikangas, Leiter, Kinnunen, & Feldt, 2020).

Hitherto, the only study concerning the relationship between occupational well-being and MTL is a cross-sectional study conducted among leaders in which four MTL-profiles were discovered (Auvinen et al., 2020). Interestingly, occupational well-being was favourable (i.e. low burnout and high work engagement) in profiles characterized by adequate AI-MTL. Thus, a sufficient level of AI-MTL seems to be essential for occupational well-being and, further, for creating sustainable careers among leaders. For professionals, the level of AI-MTL in terms of occupational well-being becomes crucial when they occupy a leadership position. Noteworthy, there are also professionals who occupy leadership positions out of different motivations or generally low level of MTL (Auvinen et al., 2020). If a professional accepts the leadership position regardless of the lacking or low motivational resources to lead, there is a risk for an unsustainable career and lower occupational well-being, caused by poor person-career fit and meaninglessness (Auvinen et al., 2020). Consequently, negative career spirals might result in a subsequent resource loss (Auvinen et al., 2020): the loss cycles of resources (i.e. negative career spirals) occur, for example, when individuals or organizations are resource

poor and any major stressor occurs, thus, the person loses resources before meeting the challenges (Hobfoll, 2011). Hence, supporting AI-MTL already at the professional level might be beneficial for leaders-to-be and their readiness to lead.

#### **1.4 The resources of sustainable career in maximizing the person-career fit: How to foster one's readiness to lead in the future?**

This study is grounded in the framework of sustainable careers (De Vos et al., 2020) and the theory embedded in it, the Conservation of Resources (COR) theory (Hobfoll, 2001; 2011). According to the framework of sustainable career, the dimensions of person, contexts, and time interact forming sustainable careers that can be characterized by three indicators: happiness, productivity and health (De Vos et al., 2020). The time dimension makes this framework particularly convenient for our study with longitudinal profiles. A person is an agent proactively impacting but also adapting to the contexts including their family, team and organization, therefore, creating a sustainable career which provides an individual with a sense of meaning (De Vos et al., 2020; Van der Heijden & De Vos, 2015). The COR theory, in turn, emphasizes the optimal balance between a resource benefit and cost (Hobfoll, 2001; 2011). According to Hobfoll (1989), resources are, for example, objects, personal characteristics, conditions, or energies (Hobfoll, 1989). In line with a more recent definition, emphasizing the motivational aspect, resources are anything functioning as a means to obtain goals (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). It has been proposed that AI-MTL can be seen as a personal resource among leaders (Auvinen et al., 2020). This seems relevant in terms of the generally increasing demands in working life (Kubicek, Paškvan, & Korunka, 2015; Mauno, Kubicek, Minkkinen, & Korunka, 2019), but especially when considering the demands that leader positions require (Li et al., 2018; Skakon, et al., 2011). Here, we strive for further understanding of AI-MTL in the context of sustainable careers and resources based on the premises conveyed by Auvinen et al. (2020).

A resource can be valuable by itself, or alternatively, in achieving or protecting another valuable resource (Diener & Fujita, 1995). Thus, we consider the role of resources from either an absolute or an instrumental perspective. AI-MTL could function as an absolute resource for professionals to rely on when offered a leadership position and for leaders as a positive

contributor, shaping sustainable leadership. However, not all positions require high AI-MTL. According to De Vos et al. (2020), sustainable career choices are made based on anchor points which encompass one's needs and values regarding what they desire in their career and private life, thus, increasing the likelihood of person-career fit. The person with high AI-MTL is intrinsically motivated towards leading and finds leadership meaningful by itself (Chan & Drasgow, 2001), hence, affective-identity MTL probably functions as an anchor point for this person (De Vos et al., 2020). On the other hand, since resources can be valued for being important for maintaining or increasing other resources (Hobfoll, 2001) and since known that social support buffers the negative impacts of stress and promotes self-esteem (Cohen et al., 2000), leader-supportive organizational climate might function as an instrumental resource fostering the favourable development of AI-MTL. Therefore, the readiness to lead among professionals could be advanced by discovering means to maintain or increase AI-MTL.

Based on the previous AI-MTL literature, we interpret the outcomes of sustainable career (happy, productive and healthy) indicating the person-career fit (De Vos et al., 2020). As for the dimension of happiness, leaders with high AI-MTL are likely to experience intrinsic motivation (Chan & Drasgow, 2001), work meaningfulness (Lehtiniemi et al., 2020), and leader emergence (Badura et al., 2020), whereas productivity-dimension could be considered to include effective leadership (Badura et al., 2020; Stiehl et al., 2015) and more constructive leadership styles (Badura et al., 2020). In addition, one's readiness to accept leadership positions could be regarded to reflect the dimension of productivity as professionals may occupy leadership positions at some point of their career. In turn, occupational well-being (Auvinen et al., 2020) reflects the health dimension. Both occupation of leadership positions and occupational well-being are investigated in our study. Moreover, the experiences, events and choices affecting the development of AI-MTL may show their effects immediately or, alternatively, after a longer period of time (Chan & Drasgow, 2001; De Vos et al., 2020). Overall, our purpose is to increase the understanding of whether leader-supportive organizational climate enhances stability or increase in the levels of AI-MTL and whether AI-MTL promotes the likelihood to occupy leadership positions and occupational well-being among leaders. This allows us to consider readiness to lead not only at the professional level but also when the leadership position has been occupied.

## 1.5 The present study

Firstly, the development of AI-MTL can be understood by utilizing a person-centred approach (e.g. Bergman & Magnusson, 1997; Von Eye, 2010) when profiling Finnish highly educated professionals in a two-year follow-up. Since it has been suggested that the construct of MTL is both stable and dynamic (Chan & Drasgow, 2001) and sustainable careers encompass stability and evolvment over time (De Vos et al., 2020), it can be assumed that profiles with both stability and change will be discovered. Thus far, longitudinal studies with developmental profiles of AI-MTL have not been conducted, and therefore, our study broadens the literature related to motivation to lead. The maintenance and development of AI-MTL would deserve more attention among research considering the relevance of AI-MTL for those working as leaders, namely the various associations of AI-MTL with the indicators of sustainable career (e.g. occupational well-being) (Auvinen et al., 2020). Here, we aim to contribute to the literature of AI-MTL and sustainable careers by studying those working as professionals at the study baseline from which others maintain their professional position and others occupy a leadership position during the follow-up. It could be assumed that professionals with higher AI-MTL are more likely to occupy those leadership positions, as the previous literature connects AI-MTL with intrinsic motivation towards leadership (Chan & Drasgow, 2001), leader emergence (Badura et al., 2020), and leadership-related career plans (Auvinen et al., 2020; Lehtiniemi et al., 2020). Altogether, if the professionals rely on AI-MTL as a resource (Auvinen et al., 2020) they might be more ready to lead.

Secondly, by addressing the role of leader-supportive organizational climate in the development of AI-MTL, we aim to gain knowledge of whether leader-supportive organizational climate functions as a possible instrumental resource promoting maintenance or increase of AI-MTL. The research regarding perceived support, recognition, and appreciation towards leadership in an organization seems to be absent. Furthermore, contextual antecedents of MTL have thus far attained limited research interest (Jones-Carmack, 2019; Porter et al., 2016). If professionals perceive a leader-supportive organizational climate, it might promote readiness to lead and encourage those with potential to become leaders to occupy leadership positions. Along with novel research evidence and our contribution to the leader-supportive organizational climate literature, organizations can be guided to offer possibilities and support to enhance AI-MTL for those working as professionals and for those who already work as

leaders. Importantly, AI-MTL appears to be a resource itself for leaders and connected to their occupational well-being (Auvinen et al., 2020). Thus, it is a valuable target of investigation.

Thirdly, previous cross-sectional research among leaders suggests that high AI-MTL is related to occupational well-being (Auvinen et al., 2020). Here, in addition to studying those who have occupied a leadership position, we aim to study professionals which allows us to gain knowledge of the person-career fit among both groups. Considering the previous research, leaders benefit from having an adequate level of AI-MTL (e.g. Badura et al., 2020). On the other hand, lower AI-MTL might indicate a better person-career fit in other positions (i.e. among professionals). As we consider occupational well-being as an indicator of sustainable career (De Vos et al., 2020), its levels in different profiles would also indicate the sustainability of a career over time. Moreover, gain spirals of resources, which in our study refer to possible favorable relations between leader-supportive organizational climate, AI-MTL, and occupational well-being, are important for work and non-work contexts, and have enfolded less research interest compared to loss spirals (Hobfoll, 2011). Altogether, both the importance of person-career fit and gain spirals, as well as the scarcity of research, justify our research purposes.

To sum up, the aim of the present study is to profile Finnish highly educated professionals in terms of their AI-MTL during a two-year follow-up. Since the exploratory nature of our first research question, no firm hypotheses can be formulated regarding the profiles. We will investigate how the identified profiles differ regarding occupation of a leadership position during the follow-up and the experienced leader-supportive organizational climate. Regarding occupational well-being, we investigate how the profiles differ among professionals as well as among those who have occupied a leadership position during the follow-up. Based on the foregoing literature, the following research questions and hypotheses are formulated:

**1. What kind of profiles of affective-identity MTL can be identified among Finnish highly educated professionals during a two-year follow-up?**

H1: Different profiles of affective-identity MTL, with both stability and change, can be identified in the two-year follow-up.

**2. How do the profiles of affective-identity MTL differ regarding occupation of a leadership position during the follow-up?**

H2a: Those belonging to profiles of higher AI-MTL are more likely to occupy a leadership position during the follow-up.

H2b: Those belonging to profiles of lower AI-MTL are less likely to occupy a leadership position during the follow-up.

**3. How do the profiles of affective-identity MTL differ regarding leader-supportive organizational climate at the study baseline?**

H3a: The profiles of higher AI-MTL are associated with higher levels of leader-supportive organizational climate at the study baseline.

H3b: The profiles of lower AI-MTL are associated with lower levels of leader-supportive organizational climate at the study baseline.

**4. At the study baseline, how do the profiles of affective-identity MTL differ regarding occupational well-being (burnout, work engagement)?**

H4a: At the study baseline, the well-being is highest among professionals who belong to lower AI-MTL profiles.

H4b: At the study baseline, the well-being is lowest among professionals who belong to higher AI-MTL profiles.

**5. At the second measurement point, how do the profiles of affective-identity MTL differ regarding occupational well-being (burnout, work engagement) when considering the occupational position (a professional position maintained vs. a leadership position occupied)?**

H5a: At the second measurement point, the well-being is highest among those who have occupied a leadership position and belong to higher AI-MTL profiles.

H5b: At the second measurement point, the well-being is lowest among those who have occupied a leadership position and belong to lower AI-MTL profiles.

## 2 METHOD

### 2.1 Data collection and participants

This study was part of the larger MOTILEAD-project implemented in the Department of Psychology in University of Jyväskylä. The original sample of the study was drawn in 2017 from the membership registers of four Finnish trade unions: the Finnish Union of University Professors, Finnish Union of University Researchers and Teachers, Finnish Business School Graduates, and Academic Architects and Engineers in Finland TEK. The electronic survey was sent to 9,998 union members of which 2,200 responded (response rate 22%). Two years later, in 2019, the follow-up survey was sent to those participants who had participated at the baseline measurement and had not declined to be contacted again ( $n = 1013$ ). The total number of participants responded in the follow-up study was 694 (response rate 69%) of which 424 were professionals. Detailed descriptions of the data can be found in the previous reports (Auvinen et al., 2019; Feldt et al., 2019).

The sample of this study comprised those participants who reported working as professionals at the study baseline and had responded to the AI-MTL scale in both measurements ( $n = 372$ ). These participants either maintained their professional position ( $n = 309$ , 83%) or occupied a leadership position ( $n = 63$ , 17%) during the two-year follow-up. The sample consisted of slightly more women ( $n = 220$ , 59%) than men ( $n = 152$ , 41%). The participants' age range was 25–66 years ( $M = 44$ ,  $SD = 9.95$ ) and their weekly working hours varied between 5–75 hours ( $M = 41.33$ ,  $SD = 7.06$ ). There were 12 professors (3%), 204 university researchers and other university academics (55%), 71 business school graduates (19%), and 85 technical academics (23%) among the studied participants.

### 2.2 Measures

*Affective-identity motivation to lead* was measured by five items from the shortened version of Motivation to Lead Questionnaire (Bobbio & Rattazzi, 2006; Chan & Drasgow, 2001) (e.g. “I



believe I can contribute more to a group if I am a follower rather than a leader” (reversed), “Most of the time I prefer being a leader rather than a follower when working in a group”). The participants answered to all the items on a 5-point Likert-scale (1 = totally disagree – 5 = totally agree). The mean score was calculated (two items reversed) and the higher scores indicate higher affective-identity MTL.

*Leader-supportive organizational climate* was measured using the three-item scale developed for the purposes of the present study. The participants were instructed to evaluate the situation of leaders in their entire organization by answering to the following statements: 1) “Leaders are appreciated in our organization?”, 2) “Leaders receive support in our organization”, and 3) “Subordinates give leaders acknowledgement of their work”. Answers were given on a 5-point Likert-scale (1 = does not describe at all – 5 = describes completely). The higher values of the calculated mean score indicate higher leader-supportive organizational climate.

*Burnout* was measured with a nine-item version of the Bergen Burnout Inventory (Salmela-Aro, Rantanen, Hyvönen, Tilleman, & Feldt, 2011; see also Feldt et al., 2014) which measures three dimensions of burnout: exhaustion (3 items; e.g. “I often sleep poorly because of the circumstances at work”), cynicism (3 items; e.g. “I feel that I have gradually less to give”), and inadequacy (3 items; e.g. “My expectations for my job and my performance have reduced”). Participants responded to each item with a 6-point Likert-type scale (1 = totally disagree – 6 = totally agree). The mean scores for the three dimensions of burnout were calculated and higher values show higher burnout. Thus, lower scores indicate better occupational well-being.

*Work engagement* was measured using a nine-item version of the Utrecht Work Engagement Scale (Schaufeli et al., 2006; see also Seppälä et al., 2009). Three dimensions of work engagement were measured including vigor (3 items; e.g. “At my job, I feel strong and vigorous”), dedication (3 items; e.g. “I am proud of the work that I do”), and absorption (3 items; e.g. “Time flies when I’m working”). The answers were given on a 7-point scale (1 = never – 7 = daily). The mean score was calculated for the three dimensions of work engagement so that higher scores indicate higher work engagement and better occupational well-being.

*Background variables* included gender (1 = female, 2 = male), age (in years), and working hours per week (in hours). In addition, dummy variables were formed regarding one’s occupational background (0 = not a member of the specific trade union, 1 = a member of the

specific trade union) and occupation of a leadership position during the follow-up (0 = has not occupied a leadership position, 1 = has occupied a leadership position). Descriptive information about the study variables are summarized in Table 1.

**Table 1.** Descriptive information about the study variables.

	Items	Range	<i>M</i>	<i>SD</i>	Cronbach's $\alpha$
<b>Time 1</b>					
Affective-identity motivation to lead	5	1–5	3.09	.75	.81
Leader-supportive organizational climate	3	1–5	2.98	.74	.80
Burnout					
<i>Exhaustion</i>	3	1–6	3.02	1.18	.74
<i>Cynicism</i>	3	1–6	2.59	1.20	.80
<i>Inadequacy</i>	3	1–6	2.99	1.37	.77
Work engagement					
<i>Vigor</i>	3	1–7	5.33	1.26	.88
<i>Dedication</i>	3	1–7	5.50	1.35	.91
<i>Absorption</i>	3	1–7	5.56	1.18	.86
<b>Time 2</b>					
Affective-identity motivation to lead	5	1–5	3.08	.73	.81
Leader-supportive organizational climate	3	1–5	2.98	.67	.77
Burnout					
<i>Exhaustion</i>	3	1–6	3.07	1.15	.74
<i>Cynicism</i>	3	1–6	2.52	1.17	.82
<i>Inadequacy</i>	3	1–6	2.78	1.25	.75
Work engagement					
<i>Vigor</i>	3	1–7	5.34	1.33	.91
<i>Dedication</i>	3	1–7	5.41	1.34	.92
<i>Absorption</i>	3	1–7	5.50	1.22	.88

### 2.3 Statistical analyses

We implemented Latent Profile Analysis using Mplus (version 8) (Muthen & Muthen, 1998-2017) in order to identify profiles (subpopulations) among the professionals based on their AI-MTL during a two-year follow-up. Continuous variables of AI-MTL at both measurement times were used to choose the optimal number of profiles which represent the whole sample in the best manner. The composition and number of latent subgroups were estimated by mean scores for both measurements of AI-MTL. The estimation of different group solutions was conducted by beginning with a one-class solution, adding groups one at a time. Lastly, we determined the point after which the increase in the number of the groups would not improve the fit of the model to the data.

The best fitting model solution (i.e. a number of latent groups) was determined by considering group proportions and different fit indices: BIC, entropy, classification probabilities, the Lo-Mendell-Rubin adjusted likelihood ratio test (LMR), the Vuong-Lo-Mendell-Rubin test (VLMR), and the Bootstrapped Likelihood Ratio Test (BLTR). Additionally, the extent to which the model was reasonable by its content was considered. The best model is indicated by the smallest BIC. Entropy and average classification probabilities are used to determine the classification quality. Entropy is used to indicate the level of separation between classes and its values range between 0 to 1 (Celeux and Soromenho, 1996; Tein, Coxe, & Cham, 2013): the closer to 1, the clearer the classification. In order to attain a statistically reliable solution, the adequate entropy value is considered to be  $>0.80$ , however,  $>0.70$  is considered as a marginal criterion value for the classification quality (Tein, Coxe, & Cham, 2013). Both LMR and VLMR are used to determine whether the improvement of fit is statistically significant after adding one more class (Nylund, Asparouhov, & Muthén, 2007). BLTR is interpreted similarly.

The further statistical analyses were conducted with IBM SPSS Statistics 27 Software. First, intercorrelations among main variables and background variables were studied using both Spearman's and Pearson's correlations depending on the scale of the variable. Second, cross-tabulation with a chi-squared test was used to examine the profiles regarding occupation of a leadership position during the follow-up. Third, one-way ANCOVA was used for studying the profiles regarding the differences in leader-supportive organizational climate at the study baseline. Fourth, regarding occupational well-being (burnout, work engagement) at the study

baseline, the profiles were examined using one-way ANOVA (cynicism) and ANCOVA (exhaustion, inadequacy, vigor, dedication, absorption). Finally, regarding the differences in occupational well-being at the second measurement point, two-way ANOVA (cynicism, inadequacy, dedication, absorption) and ANCOVA (exhaustion, vigor) were used for examining the profiles. The two fixed factors set for the two-way ANOVA/ANCOVA were the profile variable and the variable indicating whether a leadership position was occupied during the follow-up. The statistically significant background variables were set as covariates.

## 3 RESULTS

### 3.1 Descriptive results

Based on correlational analysis, AI-MTL at the baseline was positively associated with AI-MTL at the second measurement indicating considerably high rank-order stability ( $r = .76$ ). Regarding background variables, higher AI-MTL at the baseline indicated a higher number of working hours per week and occupation of a leadership position. AI-MTL at the second measurement was negatively associated with age and positively with occupation of a leadership position. In other words, those with higher AI-MTL at the second measurement were more likely to be younger and occupy a leadership position during the follow-up period.

AI-MTL at the baseline was positively associated with vigor and dedication at the baseline, as well as with vigor, dedication, and absorption at the second measurement. The higher the work engagement indicator, the higher the AI-MTL. In addition, lower AI-MTL at the baseline was associated with higher cynicism at the second measurement. In turn, higher AI-MTL at the second measurement was correlated with higher dedication at the baseline and higher work engagement dimensions at the second measurement. Correlations are summarized in Table 2 and Table 3.

**Table 2.** Pearson's intercorrelations among the main variables ( $n = 372$ ).

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
<b>Time 1</b>																
1. Affective-identity motivation to lead	-															
2. Leader-supportive organizational climate	-.04	-														
Burnout																
3. <i>Exhaustion</i>	.06	-.19***	-													
4. <i>Cynicism</i>	-.02	-.37***	.36***	-												
5. <i>Inadequacy</i>	.03	-.41***	.37***	.77***	-											
Work engagement																
6. <i>Vigor</i>	.10*	.31***	-.23***	-.63**	-.56***	-										
7. <i>Dedication</i>	.11*	.28***	-.06	-.64***	-.58***	.83***	-									
8. <i>Absorption</i>	.06	.15**	.02	-.50***	-.38***	.69***	.78***	-								
<b>Time 2</b>																
9. Affective-identity motivation to lead	.76***	-.06	.06	-.01	.00	.10	.13*	.07	-							
10. Leader-supportive organizational climate	.04	.41***	-.18***	-.15**	-.19***	.19***	.13*	.11*	-.06	-						
Burnout																
11. <i>Exhaustion</i>	.00	-.14**	.64***	.15**	.20***	-.15**	.00	-.02	.03	-.20***	-					
12. <i>Cynicism</i>	-.13*	-.24***	.28***	.48***	.41***	-.42***	-.39***	-.33***	-.09	-.34***	.39***	-				
13. <i>Inadequacy</i>	-.02	-.19***	.28***	.41***	.51***	-.33***	-.31***	-.22***	-.01	-.31***	.32***	.75***	-			
Work engagement																
14. <i>Vigor</i>	.18**	.24***	-.21***	-.42***	-.40***	.65***	.54***	.45***	.14**	.30***	-.25***	-.69***	-.55***	-		
15. <i>Dedication</i>	.23***	.21***	-.12*	-.49***	-.43***	.62***	.62***	.50***	.18***	.24***	-.12*	-.68***	-.57***	.86***	-	
16. <i>Absorption</i>	.19***	.14**	-.04	-.37***	-.32***	.54***	.55***	.59***	.14**	.23***	-.08	-.61***	-.48***	.78***	.84***	-

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 3.** Pearson's and Spearman's intercorrelations among the background variables and the main variables ( $n = 372$ ).

	Gender <sup>b,1</sup>	Age <sup>a</sup>	Working hours per week <sup>a</sup>	Professors <sup>b,2</sup>	University researchers and other university academics <sup>b,2</sup>	Business school graduates <sup>b,2</sup>	Technical academics <sup>b,2</sup>	Occupation of a leadership position <sup>b</sup>
<b>Time 1</b>								
1. Affective-identity motivation to lead	-.09	-.05	.13*	-.00	-.04	.07	-.02	.21***
2. Leader-supportive organizational climate	-.04	-.07	-.01	-.11*	-.03	.05	.04	-.01
Burnout								
4. <i>Exhaustion</i>	-.17**	.09	.30***	.13	.21***	-.11*	-.19***	.09
5. <i>Cynicism</i>	.01	.02	-.05	.06	-.04	.03	-.01	-.10
6. <i>Inadequacy</i>	.05	.06	-.01	.05	.03	-.02	-.04	-.12*
Work engagement								
8. <i>Vigor</i>	-.13*	-.03	.07	-.10	-.02	.09	-.02	.14**
9. <i>Dedication</i>	-.15**	.02	.13*	-.04	.14**	-.04	-.11*	.18***
10. <i>Absorption</i>	-.12*	.03	.07	.03	.10*	-.04	-.10	.12*
<b>Time 2</b>								
11. Affective-identity motivation to lead	-.10	-.11*	.10	.02	-.02	.06	-.04	.16**
12. Leader-supportive organizational climate	.02	-.09	-.06	.01	-.10	.07	.05	.00
Burnout								
14. <i>Exhaustion</i>	-.17**	.08	.25***	.07	.21**	-.11*	-.18**	.14**
15. <i>Cynicism</i>	.01	.03	.04	.02	.07	-.08	-.02	-.12*
16. <i>Inadequacy</i>	-.03	.02	.03	.02	.06	-.01	-.06	-.14**
Work engagement								
18. <i>Vigor</i>	-.12*	-.02	.05	-.04	-.07	.13*	-.02	.13*
19. <i>Dedication</i>	-.10	.08	.09	-.03	.06	.02	-.08	.17**
20. <i>Absorption</i>	-.08	.07	.09	.02	.02	.03	-.06	.13*

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Pearson<sup>a</sup>, Spearman<sup>b</sup>

<sup>1</sup>Female = 1, Male = 2

<sup>2</sup>Not a member of the specific trade union = 0, A member of the specific trade union = 1

### 3.2 AI-MTL profiles

We estimated altogether seven LPAs starting from a one-profile and ending at a seven-profile solution. Information about the number of participants in different profiles and fit indices of alternative group solutions is summarized in Table 4. For example, the seven-group solution had the highest entropy value but poor BIC value. In addition, it included a very small group of only 0.2% of the participants and, thus, was not meaningful for our subsequent analyses. The four-group solution had the lowest BIC value. The other fit indices and group proportions in this four-group solution were sufficient as well. However, due to the theoretical reasonability, we decided to choose the three-profile solution for further analyses. This group solution had adequate BIC, entropy and posterior probabilities (0.87, 0.86, and 0.92, indicating the rather high probability of being correctly located into a group where one is designed to belong). In addition, the content of the three-group solution was interpretive concerning that each group provided three separable profiles with different stages of AI-MTL and the group proportions were adequate (see Table 5). Finally, three latent profiles were identified to represent different subgroups of AI-MTL and its development during the follow-up.

AI-MTL for the three-group solution with means and standardized means (z-scores) for each profile is shown graphically in Figures 1 and 2. More detailed mean differences of AI-MTL are described in Table 5. We labeled the first profile as *Low-Stable AI-MTL* ( $n = 93$ , 25%). Participants who belonged to this profile had lower AI-MTL than the total mean at both measurements. The second profile was labeled as *Moderate-Stable AI-MTL* ( $n = 205$ , 55%) in which AI-MTL scores at both measurements were at a moderate level compared to the total group mean. The third profile with highest AI-MTL scores at both measurements was labeled as *High-Stable AI-MTL* ( $n = 74$ , 20%).

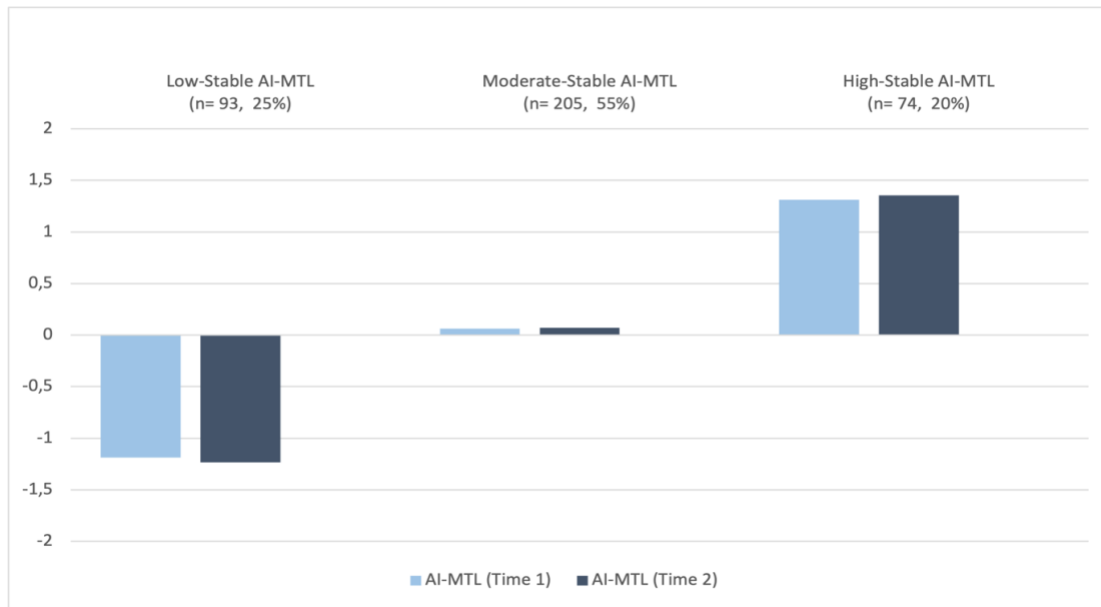


**Table 4.** Group proportions and fit indices of Latent Profile Analysis ( $n = 372$ ).

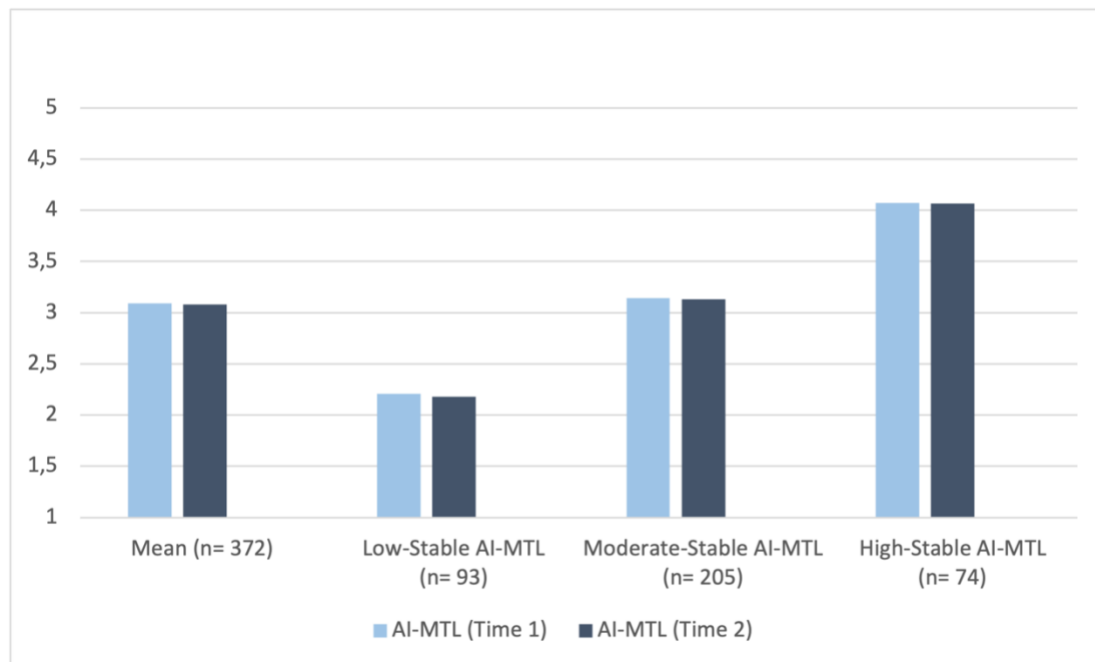
<b>Number of latent groups</b>	<b>BIC</b>	<b>Entropy</b>	<b>Latent group proportions <math>n</math> (%)</b>	<b>A diagonal matrix of classification probabilities</b>	<b>LMR</b>	<b>VLMR</b>	<b>BLTR</b>
1	1681.72		372 (100)	1.000			
2	1501.11	0.70	180 (48) / 192 (52)	0.896 / 0.924	0.000	0.000	0.000
3	1418.59	0.77	93 (25) / 74 (20) / 205 (55)	0.872 / 0.859 / 0.923	0.001	0.001	0.000
4	1404.40	0.74	131 (35) / 124 (33) / 42 (11) / 75 (20)	0.830 / 0.847 / 0.856 / 0.912	0.004	0.003	0.000
5	1414.53	0.75	73 (20) / 118 (32) / 6 (2) / 50 (13) / 125 (34)	0.913 / 0.804 / 0.663 / 0.792 / 0.838	0.476	0.463	0.500
6	1424.32	0.79	67 (18) / 54 (15) / 9 (2) / 41 (11) / 109 (29) / 92 (25)	0.802 / 0.907 / 0.802 / 0.826 / 0.849 / 0.857	0.186	0.174	0.091
7	1437.28	0.81	67 (18) / 92 (25) / 54 (15) / 41 (11) / 1 (0.2) / 108 (29) / 9 (2)	0.809 / 0.860 / 0.905 / 0.827 / 0.862 / 0.848 / 0.801	0.042	0.037	0.500

LMR = the Lo-Mendell-Rubin adjusted likelihood ratio test, VLMR = the Vuong-Lo-Mendell-Rubin test, BLTR = the Bootstrapped Likelihood Ratio Test

**Figure 1.** Three latent profiles based on AI-MTL and their standardized means.



**Figure 2.** Three latent profiles based on AI-MTL and their means.



**Table 5.** Differences of AI-MTL among three latent profiles (One-way ANOVA,  $n = 372$ ).

	<b>1. Low-Stable AI-MTL <math>n = 93</math> 25%</b>		<b>2. Moderate- Stable AI-MTL <math>n = 205</math> 55%</b>		<b>3. High-Stable AI-MTL <math>n = 74</math> 20%</b>		<b><math>F</math> (<math>df=2</math>)</b>	<b>Partial <math>\eta^2</math></b>	<b>Mean differences (pairwise Bonferroni comparisons)</b>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
<b>AI-MTL (Time 1)</b>	2.21	0.42	3.14	0.41	4.07	0.41	423.15***	.70	1 < 2 < 3***
<b>AI-MTL (Time 2)</b>	2.18	0.33	3.13	0.38	4.07	0.37	551.96***	.75	1 < 2 < 3***

Notes: \* $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

### 3.3 AI-MTL profiles and occupation of a leadership position during the follow-up

The association between the profiles of AI-MTL and the occupation of a leadership position during a follow-up period was significant ( $\chi^2(2, N = 372) = 7.81, p < .05$ ). Those who had occupied a leadership position during the follow-up were under-represented in the *Low-Stable AI-MTL* profile, whereas those who had maintained their professional position were over-represented in it. The observed distributions in each AI-MTL profile are seen in Table 6.

**Table 6.** Occupation of a leadership position among three latent profiles.

	<b>Low-Stable AI-MTL</b>		<b>Moderate-Stable AI-MTL</b>		<b>High-Stable AI-MTL</b>		<b>Total</b>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Has occupied a leadership position</b>	7	7.5 <sup>A</sup>	41	20.0	15	20.3	63	16.9
<b>Has not occupied a leadership position</b>	86	92.5 <sup>T</sup>	164	80.0	59	79.7	309	83.1
<b>Total</b>	93	100.0	205	100.0	74	100.0	372	100.0

<sup>A</sup> = under-representation (Adjusted standardized residuals  $\leq -1.96$ )

<sup>T</sup> = over-representation (Adjusted standardized residuals  $\geq 1.96$ )

$\chi^2(2, N = 372) = 7.81, p < .05$

### 3.4 AI-MTL profiles and leader-supportive organizational climate

The results of one-way ANCOVA showed a statistically significant difference between leader-supportive organizational climate measured at the study baseline and the profile variable while occupational background was controlled (see Table 7). More specifically, leader-supportive organizational climate was reported to be higher in the *Moderate-Stable AI-MTL* profile compared to the *High-Stable AI-MTL* profile. Other differences between profiles regarding leader-supportive organizational climate were not significant.

**Table 7.** The differences regarding leader-supportive organizational climate among profiles (One-way ANCOVA,  $n = 372$ ).

	1. Low- Stable AI- MTL $n = 93$ 25%		2. Moderate- Stable AI-MTL $n = 205$ 55%		3. High- Stable AI- MTL $n = 74$ 20%		$F$ ( $df=2$ )	Partial $\eta^2$	Mean differences (pairwise Bonferroni comparisons)
	$M$	$SE$	$M$	$SE$	$M$	$SE$			
<b>Leader- supportive organizational climate<sup>3</sup></b>	2.97	.08	3.06	.05	2.79	.09	3.39*	.02	2 > 3* 1 > 3 1 < 2

Notes: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Leader-supportive organizational climate scores range 1–5.

Covariates: <sup>3</sup>Occupational background.

### 3.5 AI-MTL profiles and occupational well-being at the study baseline

The results of one-way ANCOVA showed that AI-MTL profiles differ significantly regarding dedication at the study baseline. However, according to pairwise Bonferroni comparisons, the

differences between single profiles were not significant (see Table 8). In addition, no significant differences were discovered for exhaustion, cynicism, inadequacy, vigor, or absorption. The controlled variables are presented in Table 8.

**Table 8.** Differences among profiles regarding occupational well-being at the baseline (One-way ANOVA/ANCOVA).

	1. Low-Stable AI-MTL			2. Moderate- Stable AI-MTL			3. High-Stable AI-MTL			<i>F</i> ( <i>df</i> =2)	Partial $\eta^2$	Mean differences (pairwise Bonferroni comparisons)
	<i>M</i>	<i>SE</i>	<i>SD</i>	<i>M</i>	<i>SE</i>	<i>SD</i>	<i>M</i>	<i>SE</i>	<i>SD</i>			
<b>Time 1 (<i>n</i>)</b>												
<b>Exhaustion</b> <sup>1,2,3</sup> (90/201/71)	3.12	.12	-	3.00	.08	-	3.15	.13	-	1.01	.01	-
<b>Cynicism</b> (93/205/74)	2.75	-	1.28	2.49	-	1.07	2.68	-	1.40	1.81 <sup>a</sup>	.01	-
<b>Inadequacy</b> <sup>4</sup> (93/205/74)	2.95	.14	-	2.96	.10	-	3.12	.16	-	.42	.00	-
<b>Vigor</b> <sup>1,4</sup> (93/205/74)	5.07	.13	-	5.42	.09	-	5.42	.14	-	2.73	.02	-
<b>Dedication</b> <sup>1,2,3,4</sup> (90/201/71)	5.25	.14	-	5.61	.09	-	5.71	.15	-	3.06*	.02	1 < 2, 3 2 < 3
<b>Absorption</b> <sup>1,4</sup> (93/205/74)	5.44	.92	-	5.63	.08	-	5.53	.14	-	.82	.00	-

Notes: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Burnout scores range 1–6, Work engagement scores range 1–7.

Covariates: <sup>1</sup>Gender, <sup>2</sup>Working hours per week, <sup>3</sup>Occupational background, <sup>4</sup>Occupation of a leadership position (during the follow-up).

Standard errors (*SE*) reported for ANCOVA and standard deviations (*SD*) reported for ANOVA.

Levene's test for equality of variances is significant ( $p < .01^a$ ) and rejecting the homogeneity assumption. Thus, the F-test should be interpreted with caution.

### 3.6 AI-MTL profiles and occupational well-being at the second measurement point

The interaction between the profiles and occupation of a leadership position during the follow-up was not statistically significant in any of analyses conducted. Therefore, we were not able to implement further analyses with one-way ANOVA/ANCOVA, and thus, investigate the profiles regarding the differences in occupational well-being among those who had occupied a leadership position during the follow-up.

Moreover, no significant differences were found neither between the profiles and burnout (exhaustion, cynicism, inadequacy) at the second measurement point nor between the profiles and work engagement (vigor, absorption) at the second measurement point (see Table 9). For the one dimension of work engagement, dedication, the profile variable was significant, however, the results should be interpreted with caution because the Levene's test for equality of variances rejected the homogeneity assumption. The controlled variables can be seen in Table 9.

Interestingly, the variable indicating occupation of a leadership position during the follow-up was significant in the following analyses: cynicism ( $F(1, 360) = 4.14, p < .05, \eta^2 = .01$ ), inadequacy ( $F(1, 360) = 9.17, p < .01, \eta^2 = .03$ ) and vigor ( $F(1, 356) = 6.79, p < .05, \eta^2 = .02$ ). The variable was significant in relation to dedication and absorption as well, however, the Levene's test was significant.

**Table 9.** The differences among profiles regarding occupational well-being at the second measurement (Two-way ANOVA/ANCOVA).

	1. Low-Stable AI-MTL			2. Moderate- Stable AI-MTL			3. High-Stable AI-MTL			<i>F</i>	Partial $\eta^2$	Mean differences (pairwise Bonferroni comparisons)
	<i>M</i>	<i>SE</i>	<i>SD</i>	<i>M</i>	<i>SE</i>	<i>SD</i>	<i>M</i>	<i>SE</i>	<i>SD</i>			
<b>Time 2 (<i>n</i>)</b>												
<b>Exhaustion</b> <sup>1,2,3</sup> (89/197/70)	3.23	.23	-	3.18	.10	-	3.11	.16	-	.11	.00	-
<b>Cynicism</b> (92/201/73)	2.67	-	1.27	2.53	-	1.14	2.29	-	1.08	1.08	.01	-
<b>Inadequacy</b> (92/201/73)	2.83	-	1.24	2.75	-	1.26	2.81	-	1.27	.59	.00	-
<b>Vigor</b> <sup>1,3</sup> (92/201/73)	5.35	.26	-	5.43	.12	-	5.86	.19	-	2.07	.01	-
<b>Dedication</b> (92/201/73)	5.01	-	1.48	5.44	-	1.28	5.81	-	1.20	3.81 <sup>*,b</sup>	.02	1 < 2*, 3*** 2 < 3
<b>Absorption</b> (92/201/73)	5.21	-	1.32	5.53	-	1.18	5.79	-	1.11	2.95 <sup>a</sup>	.02	-

Notes: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Burnout scores range 1–6, Work engagement scores range 1–7.

The interaction between the profiles and occupation of a leadership position was not significant.

Covariates: <sup>1</sup>Gender, <sup>2</sup>Working hours per week, <sup>3</sup>Occupational background.

Standard errors (*SE*) reported for ANCOVA and standard deviations (*SD*) reported for ANOVA.

Levene's test for equality of variances is significant ( $p < .01^a$  or  $p < .05^b$ ) and rejecting the homogeneity assumption. Thus, the F-test should be interpreted with caution.

## 4 DISCUSSION

The main objective of this study was to increase the understanding of the developmental trajectories of affective-identity motivation to lead (AI-MTL). In addition, we were interested in the plausible resources enhancing the readiness to lead and the indicators emerging from sustainable careers among professionals and those who had become leaders during the two-year follow-up. We approached this by profiling AI-MTL longitudinally among Finnish highly educated professionals, and by investigating whether the profiles differed regarding occupation of a leadership position during the follow-up. The differences regarding leader-supportive organizational climate were studied at the study baseline and occupational well-being (burnout, work engagement) were studied at both the study baseline and at the second measurement point.

### 4.1 Three latent profiles with different stages of AI-MTL

Hypothesis H1 was partially supported by the results. We identified three latent profiles of AI-MTL representing different stable stages: The *Low-Stable AI-MTL* was the second largest profile including 25% of the participants while The *Moderate-Stable AI-MTL* was the largest profile with 55% participants. The *High-Stable AI-MTL* was the third largest including 20% of the participants. No profiles with either increasing or decreasing AI-MTL were found. This was contrary to our expectations of identifying some profiles with change as MTL is suggested to be both dynamic and stable (Chan & Drasgow, 2001). However, profiling AI-MTL over time has not been conducted before and therefore no firm hypotheses were set.

The fact that we did not discover developmental profiles with change could be explained by the length of the follow-up: it was limited to merely two measurement points during two years. As a personality-related dimension (Chan & Drasgow, 2001), AI-MTL could be more immune toward external factors and need relatively more time to change compared to other dimensions. This is supported by most of the existing studies which consider the change and stability of MTL: In these relatively short-term studies, AI-MTL remained quite stable



whereas some statistically significant changes were reported regarding social-normative MTL and non-calculative MTL (Collier & Rosch, 2016; Rosch, 2015; Rosch et al., 2015).

Additionally, past leadership experience and leadership self-efficacy have been considered as antecedents of AI-MTL (Badura et al., 2020; Chan & Drasgow, 2001). Indeed, it is possible for identity and values to change during one's career as new meaningful experiences occur (McAdams, 2008). Nevertheless, if the opportunities to learn and experience leadership do not exist, the leadership self-efficacy and leader-identity are unlikely to develop. Perhaps the motivation towards leadership is more likely to be internalized on a practical level as each individual has the possibility to recognize personally meaningful aspects in leadership. On the other hand, previous studies, in which AI-MTL appeared quite stable, have utilized certain leadership-related interventions (Collier & Rosch, 2016; Keating, Rosch, & Burgoon, 2014; Rosch, 2015; Rosch et al., 2015). However, they were relatively short and not explicitly structured to enhance the motivational aspect of leadership.

#### **4.2 Professionals with low AI-MTL less likely to occupy a leadership position**

Our hypothesis H2a did not gain support since we did not find professionals belonging to the *High-Stable AI-MTL* profile to be more likely to occupy a leadership position. In addition to inner motivation to lead, these career decisions might be affected by other factors: for example, family situations or perceiving a leadership position as lonely. More importantly, work in a modern organization may involve self-leadership and shared leadership. Thus, the need to lead may, to some extent, become fulfilled already in a professional position. However, the hypothesis H2b was supported. We observed that those who had occupied a leadership position during the follow-up were under-represented in the *Low-Stable AI-MTL* profile and those who had maintained their professional position were over-represented in it. This indicates that professionals who have low AI-MTL are less likely to occupy a leadership position, whereas those who occupy a leadership position are less likely to have low AI-MTL.

This finding is reasonable as it has been studied that people with higher AI-MTL are authentically motivated towards leading (Chan & Drasgow, 2001) and they are more likely to emerge as leaders (Badura et al., 2020). Higher levels of AI-MTL have also been associated with leadership-related career intentions: these leaders were willing to proceed in their career

and acquire even more demanding leadership positions (Auvinen et al., 2020; Lehtiniemi et al., 2020). This could reflect that people with higher AI-MTL enjoy being leaders and are motivated to respond to the challenges of leadership. In addition, our finding is in line with our theoretical framework since we consider AI-MTL as an anchor point to rely on when needed (De Vos et al., 2020) and as a resource for creating sustainable careers (Auvinen et al., 2020) – promoting the readiness to lead.

### **4.3 Leader-supportive organizational climate unlikely to function as a resource promoting the development of AI-MTL**

Contrary to our hypotheses H3a and H3b, participants belonging to the profile of *High-Stable AI-MTL* did not report higher levels of leader-supportive organizational climate at the study baseline, and participants belonging to the profile of *Low-Stable AI-MTL* did not report lower levels of it. However, leader-supportive organizational climate at the study baseline was higher in the *Moderate-Stable AI-MTL* profile compared to the *High-Stable AI-MTL* profile. According to Chan & Drasgow (2001), MTL can be impacted by social-learning processes and experiences but also by rather stable personality traits and tendencies. When compared to other dimensions of motivation to lead, AI-MTL is an identity-based dimension emphasizing intrinsic motivation towards leading, even a need to lead (Chan & Drasgow, 2001). Hence, social factors, such as leader-supportive organizational climate, might have a lesser effect on AI-MTL compared to other dimensions. For example, Jones-Carmack (2019) reported an association between perceived organizational support and non-calculative MTL, however, in line with our results this social factor was not associated with AI-MTL. In other words, the inner willingness to lead is probably stronger than, for instance, external opinions and attitudes.

The previous might also enlarge the understanding about why leader-supportive organizational climate was perceived higher in the *Moderate-Stable AI-MTL* profile compared to the *High-Stable AI-MTL* profile: those with moderate AI-MTL could be more responsive to external, social factors. Although our core findings indicate that leader-supportive organizational climate is unlikely to function as an instrumental resource enhancing maintenance or growth of AI-MTL, this construct should be considered further. Based on the finding that leader-supportive organizational climate was reported higher among the *Moderate-*

*Stable AI-MTL* profile compared to the *High-Stable AI-MTL* profile, could leader-supportive organizational climate play a different role depending on whether a person has moderate or high AI-MTL?

#### **4.4 More detailed contemplation required regarding occupational well-being in the context of AI-MTL**

Hypotheses H4a or H4b were not supported: occupational well-being does not seem to be higher when a person is a professional with low AI-MTL or lower when a person is a professional with high AI-MTL. At the baseline, dedication was the only dimension associated with the AI-MTL profiles. More closely, this finding was contrary to the hypotheses as dedication among professionals increased parallel to the level of AI-MTL. However, the differences between single profiles did not become significant. Likewise, H5a and H5b were not confirmed as occupational well-being does not seem to be higher for leaders with high AI-MTL or lower for leaders possessing low AI-MTL. Similarly, dedication at the second measurement point increased parallel to AI-MTL, however, we were not able to investigate the differences more closely regarding the occupational position (i.e. whether a leadership position was occupied). Moreover, dedication at both measurements was relatively high in every profile reflecting the high overall levels of work engagement in this sample.

Altogether, these findings are not in line with our assumption of person-career fit (Auvinen et al., 2020; De Vos et al., 2020). For example, we assumed that it might be even beneficial for a professional not to have high AI-MTL as there would be a misfit between a position and a motivational profile. However, these connections seem to require more detailed contemplation. There are individuals with varying levels of AI-MTL working both as professionals and leaders, and the nature of daily work, types of assignments, and organizational culture would probably matter more than the plain position-motivation fit. These factors might thus have a more fundamental role in determining the person-career fit and, presumably, occupational well-being as an outcome. Nowadays, self-leadership and shared leadership among others are commonly utilized in modern expert organizations and a position as a leader is not required in order to emerge as a leader which is predicted by AI-MTL (Badura

et al., 2020). Perhaps, AI-MTL could function as a resource regardless of the designated title of a leader.

There are additional explanations for the results. To begin with, the outcomes regarding occupational well-being might have been seen with a longer follow-up period. For example, it was not examined when the transition from a professional to a leader happened. If the event of transition occurred too near the second measurement point, the effects may manifest themselves after a longer period of time (De Vos et al., 2020). Secondly, other resources, alongside AI-MTL, might affect occupational well-being and sustainable careers. For example, the resources and demands of private life should be considered as they, for their part, form the total combination of resources utilized in work life: any individual with exceedingly high strain is likely to experience adverse health consequences regardless of the motivational profile or other available resources. Overall, occupational well-being has not been studied in the context of MTL, except for the one cross-sectional study among leaders utilizing differing motivational profiles (Auvinen et al., 2020). Therefore, this relationship requires more research.

#### **4.5 Strengths, limitations and further research**

Our study has both strengths and limitations. To begin with, AI-MTL has been profiled cross-sectionally earlier (Auvinen et al., 2020), however, this is the first study where longitudinal profiles of AI-MTL have been identified. There are certain advantages to a person-centred approach we utilized: it complements the variable-oriented research enabling gain of more detailed and diverse information (e.g. Bergman & Magnusson, 1997; Von Eye, 2010). Overall, this study enriches the current literature as the research relating to the stability and change of MTL is scarce. Next, the support leaders provide to their followers is commonly focused on, however, the reinforcement received by leaders has attained no interest. In order to study plausible resources promoting sustainable careers and to contribute to the less studied contextual factors of MTL, we defined the novel concept of leader-supportive organizational climate. Moreover, in the context of AI-MTL, well-being as an indicator of sustainable careers (i.e. person-career fit) has been studied merely among leaders (Auvinen et al., 2020), not among professionals.

Additionally, the reliability of each mean score (Cronbach's  $\alpha$ ) was at a good level and most of the scales used have been studied previously (e.g. Bobbio & Rattazzi, 2006; Feldt et al., 2011; Seppälä et al., 2009). Moreover, the size of the sample was good ( $n = 372$ ) and the group sizes were adequate. The sample was also relatively evenly distributed regarding background variables: for example, the participants represented different ages as well as working hours per week. However, professors were 3% of the participants which was a considerably low percentage. Another limitation that needs to be considered when construing the results is the study design in which longitudinal set-up was utilized solely for profiling AI-MTL while the rest of the research questions were cross-sectionally studied. Generalizability of the profiles is also limited as the profiles are sample-specific: we studied Finnish highly educated professionals. Different data could yield different profile solutions.

In addition, our study has a couple of limitations to study further. Firstly, the number of those participants who occupied leadership positions was rather small ( $n = 63$ ). Therefore, this study should be replicated applying larger and more even group sizes. Secondly, the development of AI-MTL was investigated between two measurement points during two years. This might not have been a sufficient length for studying a dimension which is based on an individual's values and identity. Hence, the future studies should investigate the developmental trajectories of AI-MTL with a longer follow-up time. Thirdly, we studied merely one dimension of MTL (Chan & Drasgow, 2001). More detailed and contrastive information would be attained if all the dimensions were studied simultaneously. Hence, the other motivational dimensions should be profiled longitudinally regarding their stability and change as well. Moreover, studying the other dimensions would enrich the literature related to contextual factors of motivation to lead. Although leader-supportive organizational climate was unlikely to function as a resource enhancing AI-MTL, it might have an impact on other dimensions.

#### **4.6 Conclusion and practical implications**

Here, we contributed to the motivation to lead literature building on the previous research of AI-MTL in the context of sustainable careers and resources (Auvinen et al., 2020). According to our two-year follow-up study, AI-MTL seems to be quite stable among Finnish highly educated professionals and profiles with different levels of AI-MTL can be identified. Our

study showed that professionals with low AI-MTL were less likely to occupy leadership positions. This might indicate the importance of AI-MTL as an anchor point in decision-making whether to occupy a leadership position or not (De Vos et al., 2020). Although the results regarding leader-supportive organizational climate and occupational well-being were not in line with our expectations, both concepts need broader investigation in the context of sustainable careers. For example, we wonder whether leader-supportive organizational climate could play a different role depending on the level of AI-MTL.

Finally, people with various levels of AI-MTL occupy both professional and leader positions, however, based on our results, low AI-MTL might constrain professionals from occupying leadership positions. Hence, from the recruiters' point of view, measuring AI-MTL might be beneficial when the recruited candidate is wished to be ready to lead in the near future. In this specific sample and within this time period AI-MTL appeared to be quite stable. However, there is no reason to strictly presume that it cannot be reinforced during one's career as motivation to lead is regarded both stable and dynamic (Chan & Drasgow, 2001) and meaningful experiences shape one's identity (McAdams, 2008). Most importantly, the research considering stability of AI-MTL is limited. Given that past leadership experience and self-efficacy towards leadership are related particularly to AI-MTL (Chan & Drasgow, 2001; Badura et al., 2020), the accumulation of these experiences might facilitate recognizing or changing one's motivation towards leadership. Therefore, organizations are recommended to actively offer professionals opportunities to accumulate such experience. Although more comprehensive research is required regarding AI-MTL in relation to sustainable careers, AI-MTL can be considered, to some extent, as a resource promoting the readiness to lead. Could this resource of leadership be reinforced by a program especially developed to support AI-MTL?

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