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Abstract

The full force of globalization has hit today's organizations, and it is clear that there are many cultural and human problems. International human resource management (IHRM) is being asked to better understand and develop multinational organizational leaders to meet the challenges. A prominent solution that is receiving increased attention is the construct of global mindset, which has growing rhetoric but little research support. To help fill this need, after first theoretically framing global mindset as made up of one's cultural intelligence and global business orientation, this study identifies and empirically tests some theory-driven antecedents. Utilizing a diverse sample (*N* = 136) of global leaders of a well-known multinational, we found that personal, psychological, and role complexity antecedents were related to the participants' level of global mindset. The practical implications of these findings for effective international human resource management conclude the article.

Keywords: international management, global mindset, psychological capital, role complexity

The arrival of globalization has led to organic growth and overall increasing numbers of multinational organizations with accompanying demand for leaders capable of operating effectively in such an environment. The challenges facing international human resource management (IHRM) in meeting these needs are daunting. Although IHRM has been dealing with selection, training, and development issues for years, there is now a realization that traditional assumptions and approaches are no longer sufficient (e.g., Meyskens, Von Glinow, Werther, & Clarke, 2009). New thinking on the part of both IHRM scholars and actual multinational organizational leaders is required (Pfeffer, 2005). The construct of "global mindset" has emerged to help fill this need at both the academic and practice levels of IHRM.

The meaning of global mindset in recent years has ranged from skills, attitudes, and competencies to behaviors, strategies, and practices (for a comprehensive review, see Levy, Beechler, Taylor, & Boyacigiller, 2007) and from individual to organizational levels (Beechler & Javidan, 2007; Perlmutter, 1969; Rhinesmith, 1992). For example, Levy and colleagues (2007) have defined global mindset as the ability to be open to and articulate various cultural and strategic realities at both the local and global levels, while encompassing these multiple perspectives. Age, education, job tenure, international management training, nationality, and willingness to work abroad have each been related to global mindset (Arora, Jaju, Kefalas, & Perenich, 2004). Other variables have also been tested as antecedents of global mindset such as curiosity, language skills, personal history, and authenticity (Clapp-Smith & Hughes, 2007), as well as the overall global strategy of the organization (Murtha, Lenway, & Bagozzi, 1998).

Although as indicated earlier, there is much speculation as to what can promote a global mindset, unfortunately to date there is very little research support. There is a need to systematically identify some important antecedents and empirically analyze their relationship to measurable indicators of global mindset. This type of research is required for an evidence-based IHRM approach to multinational organizational leadership development (Pfeffer & Sutton, 2006; Rousseau, 2006). Thus, the purpose of this study is to address this need by empirically examining the relationship between greatly respected Fortune 100 multinational corporation leaders' (*N* = 136) personal, psychological, and job-role complexity characteristics and two theoretically supported indicators of their global mindset: cultural intelligence and global business orientation. Specifically, our research question is whether multinational organizational leaders' personal (education; languages; low-, mid-, and top-level management; international business trips; and international business assignments), psychological (psychological capital composed of the positive psychological resources of hope, efficacy,

resilience, and optimism), and role-complexity characteristics are related to the two indicators of their global mindset. After first providing an overview of global mindset and deriving theory-driven hypotheses for the study, we examine the proposed relationships in a path analysis and then present the results and implications for effective IHRM.

Global Mindset

Taking a macro-level approach, Perlmutter (1969) was one of the first to describe global mindset as a geocentric orientation that multinational organizations have while doing business. Then at the micro level, Rhinesmith (1992) identified global mindset as an identity leaders have of viewing the world as a whole that would allow them to value differences, manage complexity, and scan the global environment for business trends. This micro-level trend has continued through the years and is the focus of our study as well. For example, Kefalas (1998) conceptualized one's global mindset as having a global view of the world and the capacity to adapt to local environments. Murtha et al. (1998) operationalized global mindset in terms of managers' cognition of international strategy and organization. Gupta and Govindarajan (2002) described a conceptual framework of global mindset in terms of market and cultural awareness and openness, and the ability to integrate differing perspectives. Bouquet (2005) studied global mindset and reported three overarching behaviors related to it—the capacity to process and analyze global business information, the capacity to develop relationships with key stakeholders around the world, and the capacity to use globally relevant information while making decisions for the organization.

More recent and most relevant to our study is Beechler and Javidan's (2007) description of global mindset as leaders' knowledge, cognitive ability, and psychological attributes that allow them to lead in diverse cultural environments. Similarly, in a comprehensive review, Levy, Taylor, Boyacigiller, and Beechler (2007) described global mindset as the ability to be open to and articulate about various cul-

tural and strategic realities at the local and global levels, while encompassing these multiple perspectives. Taken as a whole, this previous literature shares some common tenants pointing to what constitutes global mindset. Specifically, global mindset involves mental fluidity to adapt to the global demands facing multinational organizational leaders and also a strategic business orientation they have that evaluates complex markets and maximizes global business opportunities. We feel these two important dimensions of global mindset are best represented by cultural intelligence and global business orientation.

Two Indicators of Global Mindset

As described earlier, many conceptualizations of global mindset exist in the literature, but to date there is very little research support. However, it is apparent that global mindset does indeed have distinct characteristics. Specifically, a common theme is that an individual with a global mindset must be able to be culturally adaptable and also have an acute sense of the global business environment (e.g., see Kedia & Mukherji, 1999; Kefalas, 1998). Thus, for this study, we propose that global mindset have the two key indicators of cultural intelligence (and cognitive, motivational, and metacognitive subscales) and global business orientation.

Cultural Intelligence

Earley and Ang (2003) proposed that culturally intelligent individuals are capable of developing a common mindset derived from available information even in the absence of detailed prior knowledge of local practices and norms. Thus, a culturally intelligent person has the capability to acquire behaviors often "on the spot" that are needed in a completely different environment. Furthermore, culturally intelligent individuals are not only required to think about or understand their new environment, but they also must act in appropriate ways. According to Thomas and Inkson (2004), the ability to connect knowledge to practice is called *mindfulness,* which also has been con-

nected with global mindset. Three components of cultural intelligence can be considered indicators of a global mindset: *cognitive, motivational,* and *metacognitive.* While the construct of cultural intelligence involves a fourth component (Earley & Ang, 2003), the *behavioral,* we do not include it as an indicator of global mindset because "mindset" is an internal construct that does not directly incorporate a behavioral or observable component.

The cognitive component describes how individuals use the cultural knowledge available to them. Specifically, individuals are more self-aware and in tune with their social environment and the information available to them. According to Earley and Ang (2003), other characteristics necessary for the cognitive component of culturally intelligent individuals are cognitive flexibility, inductive and analogical reasoning, and a high degree of adaptability. The second cognitive component is the motivational facet. This describes the motivation of a person to adapt their behaviors according to a new cultural context. Individuals must be open, confident, and consistent in order to be motivated to act in culturally appropriate ways. In addition, the metacognitive component describes the capacity to acquire new behaviors that are appropriate for a new culture. Individuals understand their own cognitive strategies and control their cognitive processes by focusing in nuances (Thomas, 2006). Thus, the metacognition describes individuals' cultural conscientiousness and awareness while interacting with culturally diverse groups.

Cultural intelligence as an indicator of global mindset has also had some support in the literature. For example, Earley and Ang (2003) reasoned that culturally intelligent individuals had both the wisdom to choose the best path and the perseverance to succeed in global settings. A person with high cultural intelligence has a greater capability to "store" and catego-

> Global mindset involves mental fluidity to adapt to the global demands facing multinational organizational leaders and also a strategic business orientation they have that evaluates complex markets and maximizes global business opportunities.

rize their experiences than a person with low cultural intelligence. Thus, their mindsets are different. However, cultural intelligence should not be equated with global mindset. For example, Earley, Murnieks, and Mosakowski (2007) compared global mindset and cultural intelligence. They categorized cultural intelligence as "a person's capability to adapt effectively to new cultural contexts and it has both process and content features" (p. 83). They reported that since cultural intelligence focuses only on cultural differences and interactions, the construct is narrower than that of global mindset, yet they are interrelated. Thus, we would argue that global mindset is a broader construct, as it takes into consideration the complexity of the interaction that may or may not be related to cultural differences, but cultural intelligence is certainly a major component of global mindset, and there is considerable overlap.

> For multinational organizational leaders to have a global mindset, they must be culturally intelligent and also have a global business perspective. Both dimensions are needed in order to not only integrate the complexity of the global business environment, but also to act in culturally appropriate ways

Thomas (2006) described cultural intelligence and global mindset as the capacity of individuals to thrive in cross-cultural situations. Also, Levy, Beechler et al. (2007), whose definition we are mainly drawing from in this study, indicated that cultural intelligence may be key for the development of a global mindset. In fact, their definition suggests that cultural intelligence and global business orientation are important indicators of someone with a global mindset. Thus, it follows that for multinational organizational leaders to have a global mindset, they must be culturally intelligent and also have a global business perspective. Both dimensions are needed in order to not only integrate the complexity of the global business environment, but also to act in culturally appropriate ways (e.g., see Kedia & Mukherji, 1999; Kefalas, 1998).

Global Business Orientation

As indicated, the second dimension of global mindset we use in this study is global business orientation. This orientation describes individuals' attitudes toward internationalization and their ability to adapt to new business environments (see van Bulck, 1979). Traditionally, global business orientation has been operationalized as a macro-level variable. However, as defined, global business orientation is an individual-level construct that is related to a manager's attitude and ability to adjust to different environments (Levy, Beechler et al., 2007; Nummela, Saarenketo, & Puumalainen, 2004). This means that individuals have an awareness and knowledge of global markets and practices with a structure and process to mediate the very volatile environment. Those with a global orientation make decisions based outside one's culture and embrace diverse perspectives (Taylor, Levy, Boyacigiller, & Beechler, 2008).

Similar to cultural intelligence, global business orientation has also been operationalized as global mindset. For example, Harverston, Kedia, and Davis (2000) studied the relationship between managerial mindset and an organization's engagement in international activity and reported that global orientation of managers had a significant relationship with "born" global firms (i.e., firms that started their business operating internationally). Furthermore, managers of such born global firms had more international experience than gradual global firms' managers. Finally, managers of born global firms were reported to have higher risk tolerance than managers of gradually globalizing organizations.

The relationship between global mindset and effective internationalization of small and medium-sized companies has also been established by Nummela and colleagues (2004). In their study, global mindset was measured as global orientation to business— with elements of proactiveness, commitment, and international vision. Findings indicated that international work experience and market characteristics had a positive relationship with global

mindset. Global mindset also had a positive relationship with financial indicators of international performance.

In other research, Nadkarni and Perez (2007) studied the role of domestic mindsets in organizational internalization and reported that the complexity of a domestic mindset makes a difference while internationalizing, as leaders are more able to use the knowledge acquired in the domestic market in the global market. Finally, Taylor et al. (2008) used global business orientation to operationalize global mindset and reported that top management orientation mediated the relationship between organizational culture and HRM practices with organizational commitment. Specifically, global orientation impacted employee commitment. They concluded that top management orientation shaped employees' attitudes toward the organization.

As evidenced in those studies, many liberties and generalizations have been used to operationalize global mindset in research. Thus, for this study in addition to the Levy, Taylor et al. (2007) definition and the outlined connections previously, we draw from a global mindset research framework recently proposed by Story and Barbuto (2011) in which both global business orientation and cultural intelligence (cognitive, motivational, and metacognitive components) serve as a basis for managerial mindset. Specifically, as shown in Figure 1, we identify global mindset as an interaction of both global business orientation and cultural intelligence. Thus, individuals with a global mindset focus on global operations and markets, but are also aware and sensitive to the needs and characteristics of the local environment and culture.

It is important to note that although the present study defines and measures global mindset by the two indicators of cultural intelligence and global business orientation, as we pointed out in the introductory comments, there are numerous other conceptions in this growing literature. We posit that these two theory-driven dimensions of global mindset serve as a good point of departure for understanding and
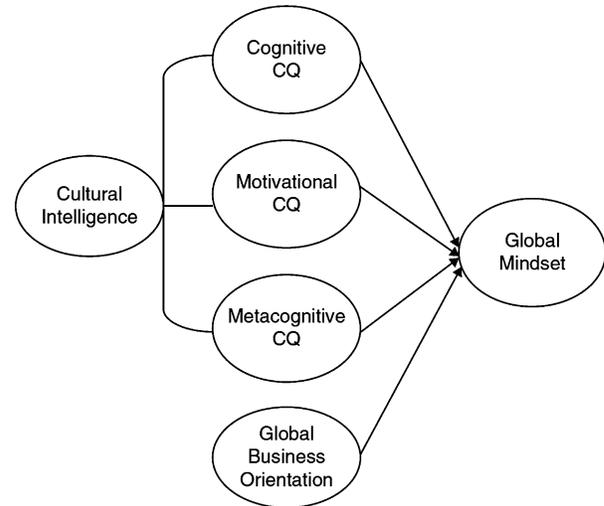

Figure 1. Indicators of Global Mindset

operationalizing the construct and empirically analyzing some of its potential antecedents.

Antecedents of Global Mindset

As indicated in the introductory discussion outlining the purpose of our study, based on existing theory we propose that personal, psychological, and job-role complexity would be good candidates for antecedents related to leaders' global mindset as indicated by cultural intelligence and global business orientation. Identifying and testing such antecedents can contribute to IHRM understanding and effective use in developing multinational organizational leaders' global mindset. An assumption of our model aligns with the so called Chattanooga model (Osland & Bird, 2008) in which the development of global mindset can be perceived to emerge as a dynamic process. Our proposed model assumes that leaders enter into a global or cross cultural context with certain characteristics and various levels of global competencies (we call this Phase 1 of the model—namely, education, level of management, number of languages spoken, and number of international business trips). Once entered into the global environment, leaders encounter a variety of experiences in which they tie one of these present experiences with past experiences that constitutes a sense-making process of
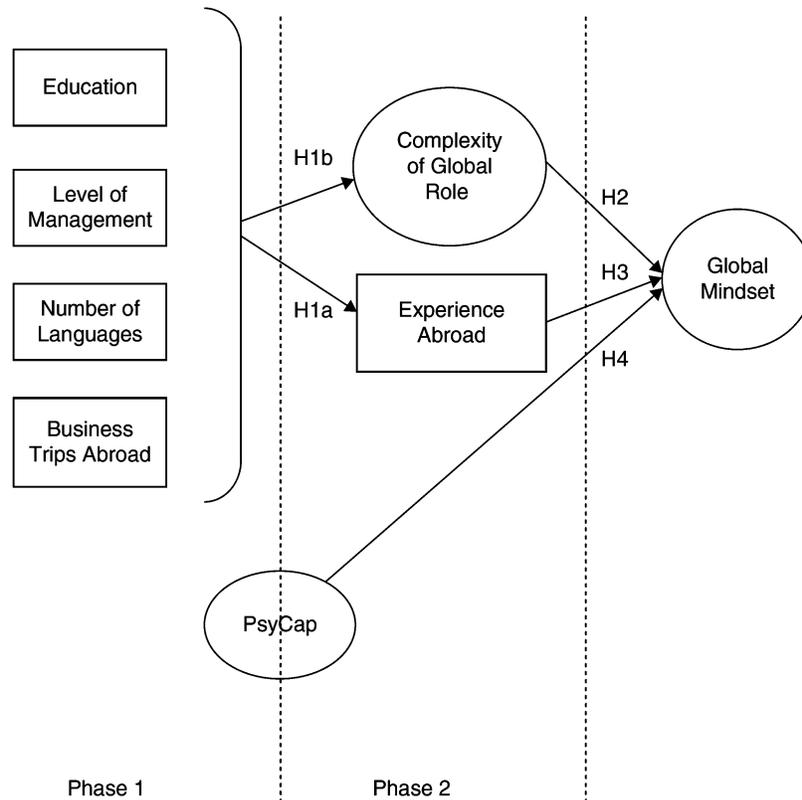
Figure 2. Hypothesized Model

learning and acquiring global capabilities (we call this Phase 2 of the model—namely, international assignment experience and complexity of global role). The number and nature of the various global or cross-cultural key experiences becomes critical to the global mindset development process, including the critical factor of having high-level challenges.

In sum, the multinational organizational leader enters the global environment with certain characteristics that make him or her more "permeable" to the global experience. At the same time, the more these experiences are rich and challenging, the more they contribute to the development of global mindset. In addition to the personal background and role complexity characteristics and international assignment experiences, we also propose psychological resources are antecedents to one's global mindset. These psychological resources are operationalized and measured by the now-recognized core construct of psychological capital (PsyCap) consisting of hope,

efficacy, resilience, and optimism (Luthans & Youssef, 2004; Luthans, Youssef, & Avolio, 2007). Importantly, this proposed model is not intended to be exhaustive (see Figure 2 for a picture of the model and summary of the hypotheses). However, this study initiates empirical testing of antecedents relevant to global mindset development that can contribute to effective IHRM.

Study Hypotheses

Personal and Role-Complexity Characteristics

The process of global mindset development is complex and multifaceted. As presented in our proposed model, before leaders enter in a global or cross-cultural context, they have certain personal characteristics and various levels of global competencies. For example, leaders who have a higher level of education could feel better prepared to take on working

abroad in a challenging role. This occurs in the same way individuals with more education tend to be selected to international jobs based on their technical ability. Empirically, Arora et al. (2004) found a significant link between a manager's level of education and his/ her global mindset. While we do not believe that education alone will lead to a global mindset, level of education seems to be an important contributor to seeking experience abroad.

Besides education, those who hold higher positions within the organization may perceive that an international assignment or challenging international role may be the only way in which they can continue to progress in their organizations. This perception may cause these leaders to take on the challenge of going abroad and taking on a demanding role. Of course, leaders who take on international assignments may be at higher levels of the organization because of the nature of their job. Thus, while we do not intend to imply causality, there may be a potential link between level of management and experience abroad.

Leaders who have more language skills may also be selected to go on an international assignment or, because they have developed these abilities, they may seek an opportunity to develop more by taking on an international assignment with a complex role. At the same time, leaders who take on international assignments may feel the need to learn more languages. Thus, there is a link between language skills and international assignments. Clapp-Smith and Hughes (2007) also reported a link between foreign-language fluency and a global mindset.

Finally, those who have traveled extensively abroad for business may feel that they are better prepared to take on the challenge and that they can grow more with the company if they take on an international assignment with a challenging role. In fact, Boyacigiller, Beechler, Taylor, and Levy (2004) proposed that international business trips at the beginning of managers' careers could potentially help them develop a global mindset. This seems important, as one's exposure to an international business environment may positively influence their international careers.

In sum, and in accordance with Clapp-Smith and Hughes (2007), personal history may have an impact on global mindset. Thus, we propose that leaders' personal characteristics, such as education, position within the organization, language abilities, and experience such as short-term international business trips, may facilitate leaders to live abroad (international assignment) and take on a complex global role (contributing to Phase 1 of global mindset development). This leads to the first hypothesis to be tested in the study.

Hypothesis 1: Education, level of management within the multinational organization, number of languages spoken, and number of business trips abroad will be positively related to (a) time spent and experience abroad and (b) the complexity of their global role.

International experience has been proposed and related to the development of a global mindset (Black, Gregersen, Mendenhall, & Stroh, 1999; Kobrin, 1994). Trigger events involving cultivating curiosity about the world, committing to learn about how things around the world work, having a clear understanding and articulation of one's own current mindset, having exposure to diversity and complexity, and attempting to integrate knowledge about diverse cultures and markets (Gupta & Govindarajan, 2002) have been associated with a global mindset (Clapp-Smith, Luthans, & Avolio, 2007). These can accumulate to provide one with a rich and extensive experience abroad.

Individuals who actually live abroad for a longer amount of time become more exposed to more cultural challenges and hardships. Osland and Bird (2008) state that the various cross-cultural key experiences are critical to the development of a global mindset. Thus, living and working in a global context can trigger a new mental model in an individual (Mendenhall, 2008) or a global mindset (Beechler & Javidan, 2007; Levy, Taylor et al., 2007; Pless, Maak, & Stahl, 2011). This leads to the following hypothesis to be tested that can contribute to Phase 2 of our model.

Hypothesis 2: Leaders' amount of time spent and experience abroad will be positively related to their global mindset indicators.

International management development has been related to a global mindset development (Stahl, 2001). These development programs can happen during an international assignment that, according to Boyacigiller et al. (2004), must be carefully managed. There must be tasks or assignments that build on the difficulty and complexity of the job in order to impact the global mindset (Kobrin, 1994). Thus, while time spent and experience abroad will arguably lead to a development of a global mindset, the type of work you might do may also contribute to its development.

Providing a challenging role (job assignment) is one of the ways to lead to the development of global mindset. Given the importance of the contextual nature of effective leadership development, it is important to define role characteristics that would be fit for a leader in a global environment, but that is also challenging. Gregersen, Morrison, and Black (1998) noted that effective leaders operating in a global environment manage uncertainty and ambiguity. Caligiuri (2006) identified through focus groups and interviews unique functions that leaders who work in a global environment must be able to effectively carry out. Specifically, they need to work efficiently and influence people from different countries and nationalities (colleagues, subordinates, and internal and external clients), speak many languages, develop a global strategic business plan for their unit, maintain the budget for their unit, and manage risks for their unit. Pucik and Saba (1998) stated that leaders who operate globally have to work across not only national borders, but also organizational and functional boundaries.

Using this review as a point of departure, we propose that some roles in a global environment have different levels of complexity. Those with a higher-complexity global role will manage uncertainty and ambiguity more frequently than those with a low-complexity global role. They will also lead teams with diverse values more frequently than those with a low-complexity global role. They will tend to use more than one language to execute their job functions and with more frequency than those with a low-complexity global role. They will work to influence team members and stakeholders from different countries and nationalities more frequently than those with a low-complexity global role. They will coordinate people and processes in different places more frequently than those with a low-complexity global role. Finally, they will work across national, organizational, and functional boundaries more frequently than those with a low-complexity global role.

In sum, leaders who have a higher complexity global role obviously work in a complex environment. These leaders will deal with challenges of the global environment more frequently than those with a low-complexity global role. Thus, the third study hypothesis that needs to be tested is the following:

Hypothesis 3: The complexity of leaders' global role will be positively related to their global mindset indicators.

Psychological Characteristics

Besides the personal characteristics and role complexity are the psychological resource antecedents represented by positive psychological capital, or PsyCap, which has been empirically demonstrated to have a valid measure and be a higher-order core construct (Luthans, Avolio, Avey, & Norman, 2007). This PsyCap is defined as

> An individual's positive psychological state of development that is characterized by (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering towards goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset any problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success. (Luthans, Youssef et al., 2007, p. 3)

As a higher-order construct, there is an underlying thread between the four components of efficacy, optimism, hope, and resilience that represent a positive assessment of situations and the psychological resources to draw from so that one can achieve success based on personal effort, perseverance, and striving to achieve success (Luthans, Avolio et al., 2007; Luthans, Youssef et al., 2007). These characteristics of PsyCap demonstrate a passion for diversity, change, sense of adventure, and self-assurance, which seem extremely important for one's global mindset. In fact, PsyCap has been shown to be strongly related to positive attitudes, behaviors, and performance outcomes (for a recent meta-analysis, see Avey, Reichard, Luthans, & Mhatre, 2011).

For relevance to global mindset development, PsyCap has also been shown to have an impact in international environments (e.g., see Luthans, Avey, Clapp-Smith, & Li, 2008; Luthans, Avolio, Walumbwa, & Li, 2005) and, more directly, Clapp-Smith et al. (2007) argued that PsyCap mediates the relationship between cognitive capacity and cultural intelligence in the development of global mindset. Accordingly, we propose that PsyCap will aid the development of an effective global leader (in all phases), as those with hope, efficacy, resiliency, and optimism reflect a desire to challenge oneself and reflect an ability to take advantage of experiences, learn, cope, and improve upon them. Thus the last study hypothesis to be tested is as follows:

Hypothesis 4: Psychological capital will be positively related to the global mindset indicators.

Methods

Sample

Participants in this study were global leaders from a widely recognized and respected Fortune 100 multinational corporation. The firm was contacted by the researchers with an invitation to participate in a university-sponsored study on the attitudes and behaviors of global leaders in multinational firms. The leaders with specific international responsibilities were identified by the organization and contacted and endorsed via e-mail by the international HR manager. A link was provided in the email to a website that contained the survey questions along with a brief description of the research project in the IRB consent form. Participation was voluntary, and in order to protect participant anonymity, all participants were assigned a code and no names were collected.

Return rates were calculated as the actual number of surveys completed by the participant global leaders. Of the 599 surveys distributed to the leaders, 161 were returned, a 27 percent return rate. Of the 161 returned surveys, 136 provided complete data that were used to develop the path analysis. The participant leaders were 30 percent female and 70 percent male, with an average age of 44 years. Twenty-two percent had obtained bachelor's degrees, 6 percent did some graduate work, 56 percent obtained master's degrees, and 5 percent PhDs. The remaining 9 percent had high school diplomas or an associate degree. Thirty-nine percent identified their ethnic descent as Asian, 9 percent Hispanic or Latino, 28 percent as white/Caucasian, while the remainder identified themselves as "other." Forty-one different nationalities were identified in the sample ranging from Chinese (6) to Syrian (1). Seven percent of the study participants spend most of their work time in Africa, 44 percent in Asia, 28 percent in Europe, 10 percent in Latin America, 8 percent in North America, and 3 percent in Oceania.

> We propose that PsyCap will aid the development of an effective global leader (in all phases), as those with hope, efficacy, resiliency, and optimism reflect a desire to challenge oneself and reflect an ability to take advantage of experiences, learn, cope, and improve upon them.

Measures

With the available sample size ($N = 136$), we chose to employ a path analysis modeling framework that captures the structural relations between constructs

but simplifies the measurement portion of the model by utilizing summary measures for each construct. Thus, all measures included in the model were evaluated in isolation through confirmatory factor analysis (CFA) in order to examine their factor structure and construct validity. The overall fit and psychometric properties of each latent variable were assessed during this process.

Global Mindset

Global mindset was measured using three subscales of the Cultural Intelligence (CQ) Questionnaire (Ang, Van Dyne, Koh, & Ng, 2004) and also global business orientation (Nummela et al., 2004). Acceptable psychometric properties and support for the construct validity of the CQ have been demonstrated by previous research (see Ang et al., 2004, and Nummela et al., 2004, for a review). Metacognitive CQ and global business orientation were assessed by four items, motivational CQ by five items, and cognitive CQ by six items. Some sample items for each of the four subscales include the following: "I am conscious of the cultural knowledge I apply to cross-cultural interactions" (metacognitive CQ); "I know the legal and economic systems of other cultures" (cognitive CQ); "I enjoy interacting with people from different cultures" (motivational CQ); and "Internationalization is the only way to achieve our growth objectives" (global business orientation). All responses are anchored on a six-point Likert scale ranging from 1 = "strongly disagree" to 6 = "strongly agree." Each of these global mindset components demonstrated acceptable internal consistency in this study, as measured by Cronbach's alpha (metacognitive CQ = 0.80, cognitive CQ = 0.89, motivational CQ = 0.84, and global business orientation = 0.89), as well as overall global mindset (0.89).

To assess the appropriateness of aggregating each of the subscales into a single factor of global mindset, we conducted a CFA with a second-order measurement model for the leader sample. All items for each subscale were set to load on their respective subscale. Standardized factor loadings range from

0.58 to 0.91 (metacognitive CQ = 0.60–0.77, cognitive CQ = 0.65–0.91, motivational CQ = 0.58–0.83, and global business orientation = 0.67–0.91). Each of the four subscales was then set to load onto the global mindset factor with standardized factor loadings for the second-order overall global mindset construct ranging from 0.41 to 0.85. All item loadings were significant at the $p < 0.05$ level on their respective latent factor as well as each component loading on the second-order factor global mindset. Based on Hu and Bentler's (1999) recommendations, results of the CFA suggest a close fit of the model to the data: $\chi^2(147) = 219.98$, $p < 0.05$; SRMR = 0.06; RMSEA = 0.06, $p = 0.18$; CFI = 0.95 for the sample.

Overall, the CFA results support that the four global mindset components do represent an underlying latent core construct of overall global mindset; thus, we are justified in utilizing a single composite score of global mindset for model parsimony. In calculating a composite global mindset score, we employed a two-step process by creating subscale scores and then using the subscale scores to create the overall composite variable. First, we averaged (averages were used instead of sums to adequately control for limited item-level nonresponses) the items from each of the four subscales to create four subscale scores. We then averaged the four subscales to obtain the total score that was used in the model. This approach has the benefit of allowing each item to contribute equally to the subscale score and each subscale score to contribute equally to the composite score (i.e., subscales with a larger number of items are not allowed to dominate the composite score relative to subscales with a smaller number of items).

Personal Characteristics

Education was assessed by the question "What is the highest level of education you completed?" *Organizational level* was assessed by the question "What level best describes your position within the organization?" *Number of languages spoken* was assessed by the question "How many languages do you speak?" *Amount of business trips abroad* was assessed by the

question "How often do you leave the country for business?" *Experience abroad* was assessed by the questions "Have you ever lived abroad?" and "How long?" Composite experience abroad was then calculated as a combination of the two questions by assigning a score of zero if the leader indicated they had never lived abroad and the number of years lived abroad if they indicated they had lived abroad.

Psychological Characteristics

Psychological capital was measured using the 24-item PsyCap questionnaire (PCQ; Luthans, Youssef et al., 2007). Acceptable psychometric properties and support for the construct validity of this PCQ have been demonstrated by previous research (see Luthans, Avolio et al., 2007). Six items in this PCQ represented each of the four components that make up PsyCap. These items were adapted for the workplace from the following widely accepted standardized scales: (1) hope (Snyder, Sympson, Ybasco, Borders, Babyak, & Higgins, 1996); (2) resilience (Wagnild & Young, 1993); (3) optimism (Scheier & Carver, 1985); and (4) efficacy (Parker, 1998). Some sample items for each of the four subscales include the following: "I feel confident helping to set targets/ goals in my area of work" (efficacy); "If I should find myself in a jam at work, I could think of many ways to get out of it" (hope); "I always look on the bright side of things regarding my job" (optimism); and "I usually manage difficulties one way or another at work" (resiliency). All responses for the PCQ are on a six-point Likert scale ranging from 1 = "strongly disagree" to 6 = "strongly agree."

To assess the appropriateness of aggregating each of the subscales into a single factor of PsyCap for model parsimony, we conducted a CFA with a second-order measurement model for our sample. The six items were set for each subscale to load on their respective subscale. Each of the four subscales was then set to load onto the PsyCap factor. Twenty one of the 24 standardized items loaded significantly on their respective latent factor at the $p < 0.05$ level, as well as each of the four component loadings on the second-order factor PsyCap. The three items (#13, #20, #23) that were not significant loadings were all negatively phrased and were reverse-scored. Residual correlations were added between the three reverse-scored items to account for the shared residual variance due to negative wording. Results of the CFA were as follows: $\chi 2(245) = 323.64$, $p < 0.01$; SRMR = 0.07; RMSEA = 0.05, $p = 0.67$; and CFI = 0.91 for our sample. Based on Hu and Bentler's (1999) recommendations, results from the CFA suggest close fit for the second-order factor model. Overall, the CFA results support that the four PsyCap components do represent an underlying latent core construct of overall PsyCap.

Initially, the efficacy and hope PsyCap components demonstrated adequate internal consistency in this study (efficacy = 0.79, hope = 0.76), but resilience (α = 0.60) and optimism (α = 0.55) showed only moderate internal consistency. A revised item-level CFA model excluding the three low-loading reverse-scored items (#13, #20, #23) resulted in a similar-fitting model: $\chi 2(185) = 256.36$, $p < 0$ .01; SRMR = 0.06; RMSEA = 0.05, $p = 0.46$; and CFI = 0.91 for our sample. Since the revised model is based on different data than the initial CFA, including the three low loading items (i.e., the second model is based on three fewer variables, which results in 69 fewer variance-covariance and 3 fewer mean structure elements to be reproduced), no direct tests of the equivalency of these models are available. Consequently, the three items that showed low loadings on their respective factors in the initial CFA (#13 on resilience: $\lambda = 0.15$; #20 on optimism: $\lambda = -0.01$; and #23 on optimism: $\lambda = 0.09$) were excluded from computation of the summary score used in subsequent modeling. This decision was supported by a traditional item analysis as well. The resulting PsyCap components showed improved internal consistency (resilience = 0.60, optimism = 0.72). Standardized factor loadings for the remaining 21 items on their first-order factors ranged from 0.29 to 0.76 (hope = 0.44–0.72, efficacy = 0.33–0.75, resilience = 0.29–0.67, and optimism = 0.49–0.76).

The overall PsyCap score used in subsequent modeling was computed in the same two-step manner, as previously described for the global mindset composite variable. The overall PsyCap score showed strong internal consistency (α = 0.85). Standardized factor loadings for the four first-order constructs on the second-order overall PsyCap construct ranged from 0.58 to 0.99.

Complexity of Global Role

Six questions assessed the complexity of the global role. The questions were drawn from the relevant literature and created by the authors. Content validity was established by asking and obtaining agreement from a panel of experts in the field if the questions were assessing complexity of global roles. The scale consisted of six questions measured by a seven-point Likert-type scale ranging from 1 = "strongly disagree" to 7 = "strongly agree." High scores indicate the high complexity of the global role and low scores low complexity in the global role. "My job requires me to coordinate people and processes in different locations frequently" is a sample item. Item 1, "My job requires me to manage ambiguity and uncertainty frequently," was found to have low correlations with other items when administered to the current sample and was dropped due to ambiguity and misfit with the rest of the item set. Confirmatory factor analysis showed that the remaining five items were indeed measuring one factor: $\chi 2(5)$ = 8.42, *p* = 0.13; SRMR = 0.03; RMSEA = 0.07, *p* = 0.14; and CFI = 0.99. Based on Hu and Bentler's (1999) recommendations, results from the CFA suggest close fit for the unidimensional model. Standardized factor loadings for the five-item measure of complexity of the global role ranged from 0.46 to 0.88, and the composite measure demonstrated adequate internal consistency in this study, α = 0.76.

Analytic Plan

To test the study hypotheses, we conducted a path analysis using manifest composite indicators of model constructs. Path analysis is a special case of structural equation modeling (SEM). Manifest composite measures were chosen rather than a latent variable structure to preserve the theoretical model but reduce the number of estimated parameters due to the sample size. In traditional covariance based SEM, the sufficient statistics are the variance-covariance matrix and a vector of means rather than the number of participants, and model degrees of freedom are based on the number of unique sufficient statistics. The number of participants contributes in ensuring that each of these sufficient statistics is approximated with sufficient precision. The modeling process results in a set of estimated parameters that most effectively reproduce the sufficient statistics. Due to the sample size available in this study, the potential use of latent variables became prohibitive because of the increased number of parameters required by latent variables and the increased number of sufficient statistics to be reproduced. By utilizing a path-analysis approach based on observed variables, the nine manifest variables (and zero latent variables) result in 45 unique elements of the variance covariance matrix and 9 elements of the mean structure to be reproduced in the modeling process. Twenty-three parameters are then estimated by the path model to reproduce the sufficient statistics, which is a 6.8 participants/parameters ratio. Alternatively, attempting to model global mindset, PsyCap, and complex global role as latent variables with manifest indicators (four sub scores, four subscores, and five items, respectively) results in 190 variance-covariance and 19 mean structure elements. The number of unique elements to be reproduced by the model then exceeds the available sample size, and the 56 estimated parameters results in a 2.4 participants/parameters ratio. For these reasons, among others, most SEM guidelines pertaining to necessary sample size indicate a minimum of N = 250 for the use of latent variables (for example, see Kline, 2010).

Calculation of composite scores was described earlier in the *Measures* section. These calculations are consistent with traditional classical test theory methods of deriving total scores to approximate latent scores. Since item-level data is available, and latent variable modeling would have been preferable

had the sample size been larger, structural (i.e., regression) effects were disattenuated for unreliability in the manifest indicators. Global mindset, complex global role, and PsyCap were modeled as single indicator latent variables where the residual term was fixed at $(1 - \rho\alpha)$ times the variance of the manifest indicator, where $\rho\alpha$ is the previously reported internal consistency estimate observed in this sample, and the loading was fixed at 1.0 for model identification. This serves the purpose of distinguishing the proportion of observed variance attributed to the true latent construct from the proportion of observed variance attributed to measurement error as would have been the case had we used a latent variable structure.

Results

Means, standard deviations, and correlations are presented in Table I. We used Mplus version 6.1 (Muthen & Muthen, 1998–2010) to conduct a multivariate path analysis using maximum likelihood (ML) estimation. *Global mindset* was regressed on *complex global role* and *experience abroad. Complex global role* and *experience abroad* were then regressed on the leaders' education, the number of languages spoken, the number of business trips taken, two dummy-coded contrast variables representing the leader's job classification (C1: 0 = top management, 1 = middle management; and for C2: 0 = top management, 1 = low management), and PsyCap. PsyCap was also allowed to have a direct effect on global mindset.

Based on Hu and Bentler's (1999) recommendations, results of the path analysis suggest a close fit of the model to the data using ML estimation: $\chi2(11)$ = 15.13, p = 0.18; SRMR = 0.04; RMSEA = 0.05, p = 0.45; CFI = 0.93 for our sample. Unstandardized estimates, standardized estimates, and standard errors for all structural paths based on ML estimation are presented in Table II.

Global mindset was significantly predicted by complex global role (B = 0.17, p < 0.01), psychological capital (B = 0.43, p < 0.01), and marginally by experience abroad (B = 0.04, p = 0.06), suggesting that lead-

ers with a more complex global role and higher psychological capital, and potentially more experience abroad, also have a higher global mindset. Thus, Hypotheses 2, 3, and 4 were supported. Complex global role was predicted by the number of languages spoken by the leader (B = 0.26, p < 0.01), psychological capital (B = 0.59, p = 0.02), and marginally by the number of business trips abroad (B = –0.14, p = 0.07). These results suggest partial support for Hypothesis 1b. Experience abroad was significantly related to the number of business trips taken (B = 0.31, p = 0.04). This result suggests partial support for Hypothesis 1a and suggests that speaking more languages, having a higher psychological capital, and perhaps taking on business trips may be related to a more complex global role, but that a leader's complex global role is not related to their management level or level of education. As would be expected, taking more business trips abroad is related to more experience abroad.

Global mindset was found to be indirectly predicted by the number of languages spoken (B = 0.04, p = 0.03) and marginally by psychological capital (B = 0.10, p = 0.052), but not by the number of business trips (via complex global role: B = –0.02, p = 0.10; via experience abroad: B = 0.01, p = 0.17). These tests of indirect effects further suggest that learning multiple languages and perhaps having an increased level of psychological capital may further lead to a leader having a higher global mindset as a function of first increasing the leader's global role complexity (see Figure 3 for a summary of the results).

> Global mindset was significantly predicted by complex global role, psychological capital, and marginally by experience abroad, suggesting that leaders with a more complex global role and higher psychological capital, and potentially more experience abroad, also have a higher global mindset.

Common Method Variance

Because the data were collected from a single source, common method variance can be a poten-

Table I. Descriptive Statistics (Means, Standard Deviations, and Correlations) for All Study Variables

	CGR	Abroad	GM	PsyCap	Educ	Lang	Trips	C1	C2	Mean	SD
					Correlations						
Complex Global Role	1									5.62	1.06
Experience Abroad	0.08	1								1.79	2.03
Global Mindset	0.33	0.19	1							5.17	0.52
Psychological Capital	0.19	0.11	0.36	1						5.06	0.38
Education	0.11	0.01	0.13	0.05	1					5.09	1.27
#Languages	0.25	0.08	0.23	0.09	0.06	1				2.43	0.95
# Business Trips	−0.17	0.15	−0.04	−0.01	−0.10	−0.06	1			1.90	1.09
C1: Top vs. Middle Management	−0.06	0.08	−0.04	0.02	0.01	0.04	−0.01	1		0.40	0.49
C2: Top vs. Lower Management	−0.01	−0.08	0.05	0.21	0.06	−0.06	0.11	−0.42	1	0.21	0.40

Table II. Unstandardized (B) and Standardized (β) Parameter Estimates, Standard Errors (SE), and Inferential Decisions for Model Structural Effects

	B	β	SE
Direct Effects			
CGR → GM	0.173	0.327	0.050*
PC → GM	0.433	0.316	0.122*
Abroad → GM	0.035	0.146	0.019†
PsyCap → CGR	0.593	0.228	0.259*
Educ → CGR	0.075	0.103	0.065
Lang → CGR	0.257	0.263	0.086*
Trips → CGR	−0.139	−0.164	0.077†
C1 → CGR	−0.237	−0.126	0.186
C2 → CGR	−0.175	−0.077	0.239
PsyCap → Abroad	0.786	0.137	0.517
Educ → Abroad	0.029	0.018	0.129
Lang → Abroad	0.145	0.067	0.173
Trips → Abroad	0.309	0.165	0.154*
C1 → Abroad	0.120	0.029	0.364
C2 → Abroad	−0.541	−0.107	0.457
Indirect Effects			
Educ → CGR → GM	0.013	0.034	0.012
Lang → CGR → GM	0.044	0.086	0.020*
Trips → CGR → GM	−0.024	−0.054	0.015
C1 → CGR → GM	−0.041	−0.041	0.034
C2 → CGR → GM	−0.030	−0.025	0.042
PsyCap → CGR → GM	0.102	0.075	0.053†
Educ → Abroad → GM	0.001	0.003	0.005
Lang → Abroad → GM	0.005	0.010	0.007
Trips → Abroad → GM	0.011	0.024	0.008
C1 → Abroad → GM	0.004	0.004	0.013
C2 → Abroad → GM	−0.019	−0.016	0.019
PsyCap → Abroad → GM	0.028	0.020	0.023

* Indicates statistical significance at the $p < .05$ level.
† Indicates marginal significance at the $p < .05$ level.

tial problem. We addressed the common method variance problem in two ways. First, Harman's single-factor test was conducted on the nine manifest variables outlined in Table I using exploratory factor analysis with maximum likelihood extraction in the SPSS 19.0 software environment. Three factors with eigenvalues greater than 1 were extracted, accounting for a cumulative 32.70 percent of the variance (13.43 percent, 13.60 percent, and 5.66 percent variance accounted for, respectively). However, the participant's job classification is a categorical variable and operationalized in all prior modeling activities as two dummy-coded contrast variables (top vs. middle management, top vs. lower management). As the exploratory factor analysis procedure in SPSS does not allow for proper designation of the contrast variables
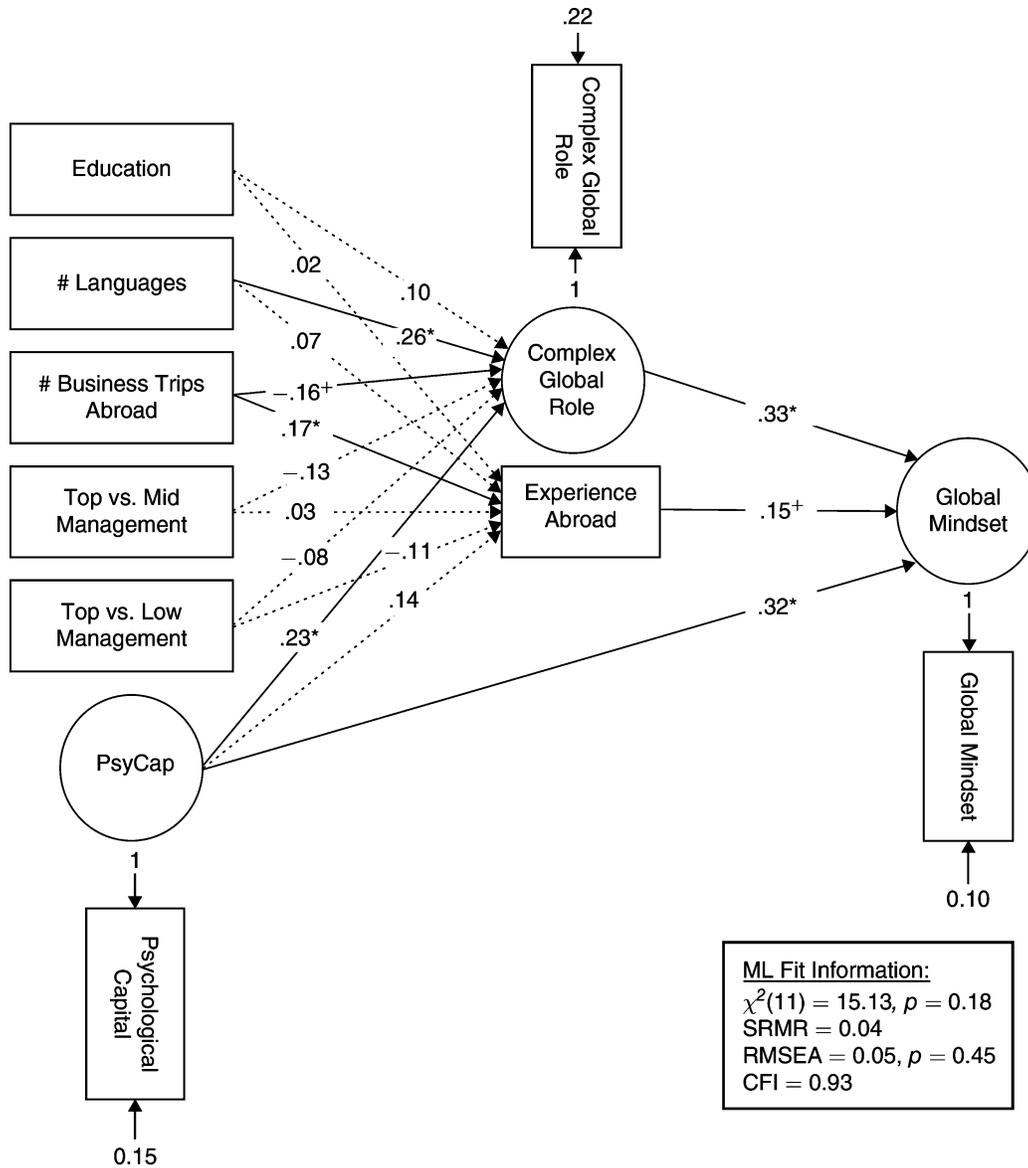
Figure 3. Path Analysis with Standardized Solution for Model of Antecedents of Global Mindset

Note: * indicates statistical significance at the *p* < 0.05 level. A plus (+) indicates statistical significance at the *p* < 0.10 level. Dashed paths indicate failure to reject a H₀: *b* = 0. Factor loadings and error variances for all single-indicator latent variables were fixed to the standardized value shown to disattenuate the model for unreliability in the manifest composite measures.

as categorical, the exploratory factor analysis was replicated using Mplus 6.0 by extracting one-, two-, and three-factor solutions using the robust weighted least squares estimator (WLSMV) and properly designating the contrast variables as categorical (i.e., dichotomous) variables.

The one-factor model did not fit the data adequately ($\chi^2(27) = 67.59$, *p* < 0.001, RMSEA = 0.10), but the two- and three-factor models did (two-fac-

tor: $\chi^2(19) = 18.47$, *p* = 0.49, RMSEA < 0.01; three-factor: $\chi^2(12) = 5.80$, *p* = 0.93, RMSEA < 0.01). Chi-square difference tests for comparing nested models suggest that the two-factor model fits better than the one-factor model ($\Delta\chi^2(8) = 43.74$, *p* < 0.01), but the three-factor model does not achieve better fit than the two-factor model ($\Delta\chi^2(7) = 11.43$, *p* = 0.12). While this diagnostic procedure does not conclusively rule out the presence of common method variance evi-

dence from Harman's single-factor test suggests that a common method factor due to the singular data-collection instrument is not the sole source of co-variation found in the model.

As a second assurance that the reported results are not biased by a common method factor, a confirmatory factor analysis (CFA) on indicator-level data was conducted to allow indicators to load on their theoretical constructs while controlling for the effects of an unmeasured latent methods factor as discussed in Podsakoff, MacKenzie, Lee, and Podsakoff (2003). The primary analytic model involves only manifest variables, and results without the latent common methods variance factor are reported in Table II and Figure 3. When a common methods factor was included in the model, the model was no longer identifiable due to insufficient degrees of freedom.

As an alternative consideration, a CFA based on theoretical measurement models where feasible and a latent common methods variance factor was conducted. Due to the sample size, *not all item-level data were used*. Complexity of the global role was measured by the five *item indicators*, global mindset was measured by the three subscale *scores* of the Cultural Intelligence (CQ) Questionnaire (Ang et al., 2004) and also the global business orientation *score* (Nummela et al., 2004), and psychological capital was measured by the four *sub scores* of hope, resilience, optimism, and efficacy based on the 21 items used to construct the overall PsyCap score as previously described. Time abroad, education, number of languages, and number of business trips were measured as single indicators. The dummy-coded contrast variables of leader's job classification were excluded due to the added estimation complexity introduced by modeling categorical outcomes in the context of a complex CFA with small samples. These 17 indicators were allowed to load as described on their theoretical constructs as well as cross-load on a latent common methods variance construct.

This model achieved approximate fit to the data: $\chi2(85) = 122.437$, $p < 0.01$; RMSEA = 0.05, $p = 0.37$; CFI = 0.93; SRMR = 0.06. Standardized factor loadings

demonstrating adequate discriminant validity between the theoretical constructs and the common methods variance (CMV) construct are reported in Table III. Note that all standardized loadings are greater for the theoretical construct than the CMV construct with the exception of an item from the complexity of global role construct.

Discussion

The development of a global mindset has emerged in recent years as an answer to help meet the challenges facing today's global leaders. There are many definitions and recognized complexities involved with what goes into a leader's global mindset. However, to date, few theory-driven models of global mindset have been formulated and empirically tested. This study tested one such model that links the development of a global mindset to the personal, role, and psychological characteristics of multinational organizational leaders. The model has two phases in which global mindset development may take place. The first phase takes into consideration the personal characteristics of leaders and their global competencies including international business trips they have taken, but before they actually enter the international environment in the form of an international assignment or global leadership role. The second phase of the model examines the quality and amount of time spent abroad on an assignment, along with the complexity of their role.

This proposed model assumes that some leaders are better prepared or have characteristics that allow them to take advantage of the developmental experiences provided. The analysis determined which of these characteristics are more relevant to the development of global mindset as indicated by theoretically supported and measured cultural intelligence and global business orientation. The study results indicated partial support for the overall model and study hypotheses as shown in Figure 3.

More specifically, in Phase 1 of the model, the analysis indicated that the number of international busi-

Table III. Standardized Factor Loadings Between the Theoretical Constructs and the Common Methods Variance Construct

	Theoretical Construct	Common Methods Variance Construct
Complexity of Global Role		
Item 2	**0.50**	0.12
Item 3	0.12	**0.76**
Item 4	**0.73**	0.49
Item 5	**0.67**	0.22
Item 6	**0.75**	0.34
Global Mindset		
Metacognitive CQ	**0.64**	0.04
Cognitive CQ	**0.51**	0.30
Motivational CQ	**0.71**	−0.12
Global Business	**0.35**	−0.01
Psychological Capital		
Hope	**0.88**	0.10
Efficacy	**0.60**	−0.06
Resilience	**0.47**	0.03
Optimism	**0.64**	−0.17
Single Indicator Constructs		
Travel Abroad	**1.00**	0.01
Educ	**0.99**	0.15
Lang	**0.81**	0.58
Business Trip	**1.00**	0.04

ness trips individuals took contributed to their international experience, but these trips only marginally contributed to the complexity of their global role. The opposite was the case for number of languages learned. Multilanguage proficiency was directly related to the complexity of their global role but did not relate to their international experience. Education and level of management did not contribute to the model. In other words, the results both support conventional wisdom and run counter to it in terms of how to develop global mindset.

At the general level, the results indicate that two dimensions of the model play a relatively larger role in the development of global mindset: complexity of global role and psychological capital. As indicated, the role of positive psychological capital has been conceptually linked to global mindset development (Clapp-Smith, Luthans et al., 2007) and, of course, has been demonstrated in previous research to have a robust impact on desired employee attitudes, behaviors, and performance (see the meta-analysis of Avey et al., 2011). This study now provides empirical evidence that PsyCap is also related to global mindset. On the other hand, contrary to conventional wisdom, this study found that international assignments only marginally contributed to global mindset development. Overall, these findings have IHRM implications not only for better understanding, but also the practical development of a global mindset.

Practical Implications

In terms of the most significant results relevant to effective IHRM are the number of languages spoken,

the leader's role complexity, and the leader's psycho-logical capital. These findings have important implications for global mindset development. In particular, language skills were found to be the most important personal characteristic that is related to global mindset. This finding supports previous research by Clapp-Smith and Hughes (2007) and Konyu-Fogel and Cole (2011). Considering that this is a skill that leaders can develop by taking language instruction, this becomes an evidence-based practical guideline for effective IHRM.

The numbers of international business trips correlated with overall international experience but did not share a relationship with their role complexity. This means that those who take multiple trips abroad for their job may lead them to take on an international position, but this travel may not contribute to their role complexity. Travels abroad are not found in this study to be directly correlated with global mindset. This finding goes against conventional wisdom and Boyacigiller and colleagues' (2004) suggestion that international trips might lead to a global mindset. Our study results suggest that international travel may be overrated as a developmental technique for IHRM. This could be explained by the fact that such trips most often entail staying and dining at five-star Western-style establishments with local hosts trying to impress and accommodate. Such visitors never really experience the grass-roots culture and values, and thus this does not contribute to their global mindset development. However, despite this finding we would still say that international trips are better than nothing and should still be considered but with the caveat that the visitor try to experience the local culture. Visitors should proactively try to "get out of the hotel" and not only dine at local restaurants, but, if possible, visit the homes of locals or even expats. The same is true of trying to get out of the big cities and experience the potentially more relevant cultures of the small cities of a given country.

Interestingly, our findings also challenge another main assumption put forth by many scholars that international assignments are key for the development of a global mindset (e.g., Black et al., 1999). An assumption of their hypothesis is that individuals who live abroad for a significant amount of time are more exposed to multicultural challenges and hardships. However, based on our findings one can also develop a global mindset by undertaking a globally challenging role and not just by living abroad. This does not mean that this international experience isn't important (as moderately correlated with global mindset), but that the complexity of their job role may be more relevant to their global mindset than just living abroad. Living abroad may turn out to be like visiting abroad. That is, those on international assignments may be living in an insular enclave of those like themselves, sealed off from the local culture.

The relative importance of role complexity over just living abroad is very relevant for effective IHRM because it can be practically done. Although it is still important to point out the many challenges that exist in selecting the right person for international assignments and that many failures may occur, according to the findings in this study, if the assignments are not challenging, they only marginally may lead to the development of a global mindset. This goes in line with what was also suggested by Boyacigiller et al. (2004) that international management development needs to be carefully managed.

The specific guideline for effective IHRM is that job assignments need to be carefully managed for the development of a global mindset. The tasks or assignments must build in the difficulty and complexity of the job in order to impact the global mindset (Kobrin, 1994). In this sense, working effectively and influencing people from different countries and nationalities become a key challenge. Leading teams with diverse values, frequently using multiple languages to execute their job functions, create a challenging, complex work role. The coordination of people and projects in different places, and working across national, organizational, and functional boundaries are also characteristics of challenging job assignments. In sum, working with and leading diverse teams and stakeholders in different locations, from different functions, and

that speak different languages characterizes a challenging global role that allows for global mindset development. Being able to transcend cultural differences and bring different groups together becomes key to not only global mindset development, but also effective leadership (Graen & Hui, 1999). Thus, IHRM needs to carefully design job assignments to make sure they are challenging and provide leaders with the opportunities to work in such complex job roles.

In terms of psychological capital, these positive resources provide individuals the strength to take advantage and persevere in their careers. In a complex global environment, negative responses and confusion may lead individuals to become closed minded or inflexible (Bartunek, 1988). On the other hand, those having high psychological capital are more able to overcome these trials and tribulations. Hope provides individuals the willpower and motivation to achieve their goals and the pathways to successfully reach these goals (Luthans, Youssef et al., 2007). Thus, more hopeful leaders are better able to tackle the challenges associated with a multicultural environment. Hopeful leaders will find different and perhaps more creative ways to achieve their goals. Efficacy provides leaders the confidence to succeed in a task (Bandura, 1997). This means that high levels of efficacy allow the leader to mobilize the motivation and cognitive resources to effectively operate in a multicultural setting. Resiliency is the ability to bounce back from setbacks and adversity (Luthans, Youssef et al., 2007). Resilient leaders are more adaptable and more comfortable dealing with challenging situations. They often challenge their own assumptions about the way they view the world (Luthans, Youssef et al., 2007). This resiliency resource seems especially important when operating under a stressful and complex multicultural environment. Finally, optimistic individuals make positive attributions to events and have positive future expec-

> IHRM needs to carefully design job assignments to make sure they are challenging and provide leaders with the opportunities to work in such complex job roles.

tations (Luthans, Youssef et al., 2007). This means that they are more open and are able to broaden their cognitive processes in response to global complexities and thus contribute to their global mindset.

PsyCap has also been related to other desired employee attitudes, behaviors, and performance outcomes (Avey et al., 2011). It is key for IHRM that PsyCap has been experimentally demonstrated to be open to development in an online training intervention (Luthans, Avey, & Patera, 2008) and to cause performance to improve after training intervention (Luthans, Avey, Avolio, & Peterson, 2010). Recent longitudinal research also supported the causal impact of PsyCap on both supervisor evaluations and objective performance (Peterson, Luthans, Avolio, Walumbwa, & Zhang, 2011). In other words, PsyCap is open to development and may have a causal impact on not only performance, but also global mindset.

In sum, the implications of these findings for effective IHRM are threefold. First, the importance of a challenging role significantly relates to global mindset and it is also related to the amount of languages a person speaks. Second, trips abroad and international assignments may be overrated as having developmental value for global mindset. However, if managed carefully to ensure getting grass-roots cultural experiences and in the case of international assignments making sure the leader has a challenging, complex job role involving multicultural dimensions, these international experiences can still offer development of global mindset. Finally, psychological capital is related to the complexity of a global role and global mindset, proving to be a key construct for global mindset development. These findings allow practical guidelines for effective IHRM that are evidence-based and not based on anecdotal or conventional wisdom.

Study Limitations

Despite the study's strengths and practical implications, some potential limitations need to be acknowledged. Data were collected from a single source, which may potentially lead to the single-source bias effect. We addressed this limitation by conducting two statistical tests: Harman's single-factor test and

a confirmatory factor analysis (CFA) on indicator level data which allows the indicators to load on their theoretical constructs while controlling for the effects of an unmeasured latent methods factor (see Podsakoff et al., 2003). These analyses demonstrate that despite single-source bias potential, the data analyses do not appear to be affected by it.

Another potential limitation is the sample size (*N* = 136), which led to a more simplified model and potential reliability problems. However, the trade-off for the size of the sample was that these participants were restricted to a well-known, multinational firm that was ideal for the study of global mindset. A final potential limitation was also a strength, which was the diversity of the sample. Cultural differences may have impacted some of the results. For example, the amount of international business trips may be unique to US managers in their decision of living abroad. On the other hand, this may be less important to European managers because they are more likely and more used to visiting and working in many different countries.

While we do believe our model has two phases and we may unintentionally imply causality at places, it is important to point out that we only established relationships, and these certainly could go either way. For example, a leader with a global mindset may be chosen to have a complex global role; thus, having a complex global role is a prerequisite for global mindset. While we theoretically argue for one direction in formulating the study hypotheses, it does not mean that is the only or right direction. This may be a limitation, but in terms of practical and theoretical implications for IHRM, our recommendations do not change. If our focus is how to explain and develop a global mindset, we do know that a higher, more complex global role also increases a global mindset, so it remains that the strength of the relationship may be more important than the direction.

For the future, research can benefit from testing other possible antecedents such as personality, management education, and leadership styles to see if they lead to global mindset development. Other studies probably could benefit from a different operationalization of global mindset or a different theoretical

model. Since this study is just initiating the empirical analysis of the antecedents of global mindset, more sophisticated research such as longitudinal, experimental, and qualitative designs would benefit the field. However, this study serves as a very important step for helping meet the challenges facing IHRM, and it identifies some evidence-based practical guidelines for global mindset development.

Conclusion

Today's global environment has led to many changes in the ways multinational organizational leaders conduct business as well as the need for IHRM to identify and develop the necessary characteristics to be effective in such complexity. Training and development of leaders are not just one component of the IHRM program; they now have become top priority (Stroh & Caligiuri, 1998). Global mindset is becoming recognized as an overlooked, unique characteristic necessary for effectively working globally. Thus, development of leaders and staff should focus on global mindset development. In this study, the complex process of global mindset development that takes into consideration the leader's personal, psychological, and role complexity characteristics were analyzed. Our findings are important, as they provide evidence based management practice for IHRM management.

> If our focus is how to explain and develop a global mindset, we do know that a higher, more complex global role also increases a global mindset, so it remains that the strength of the relationship may be more important than the direction.

In training and developing staff and leaders capable of effectively working in a global environment, it is important for effective IHRM to take into consideration the characteristics that lead to global mindset development. In this study, the number of languages a leader spoke was one of the few personal characteristics relevant for the development of a global mindset. In our model, leaders who

spoke more languages had a more complex global role, which in turn led to a global mindset. Another personal characteristic that was moderately correlated to global mindset was experience abroad. This was also related to the amount of business trips a leader took. However, we found if leaders actually live abroad, then they are moderately likely to increase their global mindset. Yet, merely taking international business trips did not seem to increase their global mindset.

Complexity of the role of a leader was shown to directly impact global mindset. Leaders who have more challenging and complex assignments were found to have a stronger relationship with global mindset. These rich experiences seem important to global mindset development. Psychological characteristics represented by positive psychological capital were also found to directly impact global mindset. Leaders who are more hopeful, confident, resilient, and optimistic also have a higher level of global mindset. As indicated in this study, the antecedents of global mindset are varied and complex but offer promise of helping IHRM effectively meet the challenges that lie ahead.

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