

Psychometric properties of the human system audit-transformational leadership short scale in Germany and Philippines: A cross-cultural study

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Abstract

The aims of this research are to analyze the psychometric properties of the Philippine ($N = 308$) and German ($N = 200$) version of the Human System Audit transformational leadership short-scale (HSA-TFL short-scale) and to identify whether transformational profiles are similar or different in both countries. In today's globalized environment, the number of multinational organizations increases and trade relations between countries become straighter. This intensifies the companies' need for short leadership instruments that are scientifically designed, reliable and quick to apply. We analyzed factor structure, convergent and criterion validity, as well as transformational profiles for Germany and the Philippines, both important economies in their regional economic blocks that experienced a considerable growth of their bilateral relations. Results indicate that the HSA-TFL short-scale is a reliable instrument (Philippines: $\alpha = .90$; Germany: $\alpha = .91$) with a one-factor structure for the Philippine (RMSEA = .08, CFI = .88) and the Germany version (RMSEA = .06, CFI = .89) showing convergent validity for both countries. Criterion validity was different in both countries and sensible to the cultural context. The transformational profiles, using the Multifactor Leadership Questionnaire (MLQ-5X), showed differences for both countries. This research provides empirical evidence for the validity and usefulness of the HSA-TFL short-scale.

Keywords: transformational leadership; cross cultural validity; short scale

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Propriedades psicométricas da escala curta de liderança transformacional da auditoria do sistema humano na Alemanha e nas Filipinas: um estudo cross-cultural

Resumo

O objetivo desta investigação é analisar as propriedades psicométricas da versão Filipina (N = 308) e Alemã (N = 200) da versão reduzida da “Auditoria do Sistema Humano – liderança transformacional” (HSA-TFL versão reduzida) e identificar em que extensão os perfis de liderança transformacional são similares ou diferentes na Alemanha e na Filipinas. No contexto globalizado atual, aumentam o número de organizações multinacionais e se ajustam as relações comerciais entre países. Com isso, se intensifica a necessidade em organizações multinacionais de instrumentos parcimoniosos para medir a liderança e que sejam elaborados cientificamente, confiáveis e de aplicação rápida. Analisamos a estrutura fatorial, validade convergente e de critério, assim como os perfis de liderança transformacional na Alemanha e Filipinas, ambas economias importantes no seu bloco econômico regional que experienciaram um crescimento considerável das suas relações comerciais bilaterais. Os resultados indicam que o HSA-TFL versão reduzida é um instrumento confiável (Filipinas $\alpha = .90$; Alemanha: $\alpha = .91$) com estrutura unifatorial quer para a versão filipina (RMSEA = .08, CFI = .88) quer para a alemã (RMSEA = .06, CFI = .89), demonstrando validade convergente para ambos os países. A validade do critério foi diferente nos dois países e sensível ao contexto cultural. Os perfis transformacionais, baseados no Multifactor Leadership Questionnaire (MLQ-5X), mostraram diferenças para ambos os países. Esta investigação fornece evidências empíricas da validade e utilidade da HSA-TFL na sua versão reduzida.

Palavras-chave: liderança transformacional; validade cross-cultural; escala curta

INTRODUCTION

The aims of the present research are a cross-cultural analysis of the psychometric characteristics comparing the German and Philippine’s version of the HSA-TFL short-scale and of transformational leadership (TFL) profiles. Given the organizations’ need to adapt to current changing environments (Jung, Bass, & Sosik, 1995; Mittal, 2015), TFL, which was developed and studied first for western cultures (Felfe, Tartler, & Liepmann, 2004), currently is considered as one of the most effective positive leadership styles (Dumdum, Lowe, & Avolio, 2002) at all levels and across cultures (Bass, Avolio, Jung, & Berson, 2003; Braun, Weisweiler,

& Frey, 2013; Lowe, Kroeck, & Sivasubramaniam, 1996). Therefore, the positive relations of TFL to organizational outcomes evidence that investment on training programs to develop transformational leaders is a good strategy for organizations looking for improvements (Barling, Weber, & Kelloway, 1996; Felfe et al., 2004).

With the globalization and growing number of companies that decided to implement an internationalization strategy and to expand their business to different countries (Dean & Ritzer, 2012), the need for cross-cultural collaboration and management became more important (Shi & Wang, 2001) and, along, expatriation of managers increased (Larsen, 2004). Following Scandura and Dorfman (2004), research on cross-cultural validation of instruments to screen leadership in globalized business' is still scarce and even today needed as some recent studies validated other leadership styles like identity (Dick et al., 2018), ethical (Zhu, Zheng, He, Wang, & Zhang, 2017) and servant leadership (Rodríguez-Cavajal, de Rivas, Herrero, Moreno-Jiménez, & van Dierendonck, 2014), but not short transformational leadership screening instruments.

Even though leadership has been studied recently in Asia, Arvey, Dhanaraj, Javidan and Zhang (2015) and Lam, Huang and Lau (2012) mention that the growing importance of eastern economies in our globalized world should be taken into account and that leadership theories and practices developed in western contexts may lack adjustment to non-western contexts. Therefore, the topic still needs more scientific contribution (Arvey et al., 2015).

Although the Multifactor Leadership Questionnaire (MLQ 5X), developed by Bass (1985) and Bass and Avolio (1997), is a well-known and valid instrument to assess leadership, its size is often seen too long for practical purpose. The current context of fast changes, new technologies and processes in the companies call for short and quick to apply instruments that save up time and resources, what is "clearly preferred for surveys" (Tejeda, Scandura, & Pillai, 2001, p. 48). As for the availability of reliable and valid short instruments to assess TFL in Asian organizations, Arvey et al. (2015) highlight that peculiarities within Asian countries are relevant, but still less explored (Lam et al., 2012; Mittal, 2015).

Taking the above-mentioned aspects into account, a short valid and reliable instrument to measure TFL in further Asian economically growing countries, based on scientific studies and usable for combined quality-related company assessment is necessary (Berger, Yepes, Gómez-Benito, Quijano, & Brodbeck, 2011). In our research, Germany and Philippines were chosen as they are representatives of western and eastern culture. Philippine has a stable macroeconomic environment, being an Asian economy that shows high growth rates (Federal Foreign Office, 2017). Germany is amongst the first five economies in European Union, occupying the first position in 2015 (Schwab, 2015). Both countries are establishing a closer bilateral relationship in politics and increased their trade relations in the past years, being Germany one of the biggest foreign inves-

tors in Philippines among the top 10 market destinations of exports and being the first destination in European Union. As for TFL, nevertheless, in Philippines we found no relevant research till this moment. Hence, this research aims to contribute first to the psychometric validation of a short and reliable TFL instrument for Philippines, being the first validation providing evidence of the factor structure stability across cultures. Second, this research aims to contribute to the existing cross-cultural literature about TFL profiles in Europe and Asia by adding information to a scarce body of research about the topic, particularly in Southeast Asia. Third, the comprehension of compared German and Philippine TFL profiles has practical implications offering inputs for the design of training programs for expatriate managers (Mittal, 2015; Muenjohn & Armstrong, 2007; Thomas, Lazarova, & Inkson, 2005).

In study 1, the cross-cultural psychometric analysis of the HSA-TFL short-scale was done for the German and Philippine version using several sources: factor structure applying confirmatory factor analysis (CFA), internal consistency, convergent and criterion validity. In study 2, the German and Philippines' TFL profiles, measured by the transformational part of the MLQ-5X (TFL), were compared and analyzed using Hofstede's model of cultural dimensions (Hofstede, 2011).

Transformational Leadership

TFL is seen as the most popular leadership theory (Arnold, 2017; Bass, 1985; Bass & Avolio, 1997; Lanai, Johnson, & Lee, 2016). It consists of four dimensions, the so called "Four I's". Research shows that all four transformational dimensions have a more positive relationship with employees' wellbeing (Breevaart & Bakker, 2018) and with subjective (Dumdum et al., 2002; Kranabetter & Niessen, 2017) and objective (Geyer & Steyrer, 1998) performance at all levels (Bass et al. 2003) and across cultures (Berger et al. 2011) than transactional scales (Lowe et al. 1996). Inspirational motivation (IM) refers to a leader that is able to create a common vision. Individualized consideration (IC) is the leader that is able to develop follower's individual strengths treating each follower as an individual with own needs and abilities. Intellectual stimulation (IS) means that the leader motivates his/her followers to find new ways of analysing and solving problems. Idealized influence (II) measures attributed impact (Yukl, 2010) of positive values and attitudes (Bass et al. 2003) on followers. There is disagreement on the TFL factor structure evidencing a four-factor structure in Singapore, a representative of southeastern culture like Philippines (Bass, 1997) as well as a one-dimensional structure for the MLQ-5X-TFL short version (16 items) in Hong Kong (Sheer, 2010) and in several other cultures (Berger, et al., 2011; Den Hartog, Van Muijen, & Koopman, 1997; Goodwin, Wofford, & Whittington, 2011;

Tejeda et al., 2001). This shows that more research is needed to clear the factor structure cross-culturally (Goodwin et al., 2011) as both perspectives are considered relevant for academic and practical contexts (Antonakis, Avolio, & Sivasubramaniam, 2003; Bass et al., 2003). Bass (1996) argues that TFL can be seen as universal as the concept exists in different cultures with important relations to organizational outcomes. In Germany, TFL validation started to be a topic in scientific research during the 1990's (Felfe et al., 2004; Rowold, 2005). In Philippines, we found no study on TFL validation. The HSA-TFL short-scale, that is based on Bass' (1985) TFL concept answers the above-mentioned requirements (Carless, 1998; Felfe, 2006; Quijano, Navarro, Yepes, Berger, & Romeo, 2008) for short screening instruments with its practical advantages for the implementation of intervention showing consistently good psychometric characteristics for samples in diverse sectors (Berger, Romeo, Guardia, Yepes, & Soria, 2012). The 8-item HSA-TFL short-scale was developed in the frame of the Human Systems Audit (HSA) (Quijano et al. 2008), first in Spanish, then translated into English, Portuguese, Polish (Berger et al., 2011) and German (Kolbe, 2009) confirming always a one-dimensional factor structure (Berger et al., 2012). It evaluates employees' perceptions of their direct supervisors' TFL. Based on these previous findings concerning the factor structure of the HSA-TFL short-scale and psychometric properties (Berger et al., 2011, 2012) we expect:

H1: The construct validity of the HSA-TFL short-scale is similar in the German and Philippines' samples.

H1a: The HSA-TFL short-scale in Philippines and Germany will show a one-dimensional factor structure.

H1b: Convergent validity for the Philippine's sample will be significant and similar to those obtained for the German one.

Cultural approach

Even transformational leadership is considered a universal concept (Bass, 1996), variations can be found in different cultural contexts (Bass, 1997) because universality does not mean that outcomes related to TFL and its profiles will be exactly the same in all cultural contexts. The perception of this behavior seems to be influenced by cultural differences as individuals with different cultural values may perceive leadership differently (Spreitzer, Perttula, & Xin, 2005). In this sense, the relationship of TFL and its outcomes in form of criterion validity (Liden, 2012)

and the TFL profiles might be explained by cultural difference (House, Hanges, Javidan, Dorfman, & Vipin, 2004).

This research is based on Hofstede's model of national cultural dimensions, the most used model in cross-cultural studies (Dickson, Den Hartog, & Mitchelson, 2003; Dorfman et al., 1997) with updated data collection in Germany and Philippines (Hofstede, 2018). For the interpretation of our results we focus on the following cultural dimensions: power distance, individualism, and uncertainty avoidance, that, according to Ergeneli, Gohar and Temirbekova (2007), are related to the emergence of TFL and to its relation with performance outcomes and on the dimensions masculinity and long term orientation. According to Hofstede's model of cultural dimensions countries scores in each dimension range from 0 to 100, being 50 the midlevel; scores below 50 are considered as relatively low and scores over 50 as relatively high (Hofstede, Hofstede, & Minkov, 2010). The current scores of the cultural dimensions are presented in Hofstede Insights (2018) and summarized in Table 1. It can be observed that Philippines show lower scores on individualism, uncertainty avoidance and long term orientation than Germans and higher scores on power distance. For the dimension masculinity the scores are very similar (Hofstede, 2018).

Table 1
Germany and Philippines scores on the Cultural Dimensions related to Transformational Leadership emergence

| Cultural Dimensions | Germany | Philippines |
|-----------------------|---------|-------------|
| Power Distance | 35 | 94 |
| Individualism | 67 | 32 |
| Uncertainty Avoidance | 65 | 44 |
| Masculinity | 66 | 64 |
| Long Term Orientation | 83 | 27 |

Source: Hofstede Insights (2018). Retrieved November 25, 2018 from <https://www.hofstede-insights.com/product/compare-countries/>
Note. Hofstede's scale range is from 0 to 100, being 50 the midlevel.

The relationship between TFL and SATISFACTION (SAT) in both countries might be explained by power distance and individualism (vs. collectivism). Power distance is defined as the extent to which the less powerful members of an organization within a country expect and accept that power is distributed unequally. It was found that power distance influences the relationship between TFL and outcomes in China and Eastern countries (Atwater, Wang, Smither, & Fleenor, 2009, cited by Liden, 2012). Philippines is considered a hierarchical society, in which people accept centralized decisions. In organizations, subordinates prefer to be told what to do. They are satisfied with leaders that are benevolent, care about the well-being of their employees or are also autocrats. Germany is a decentralized society, with

low score on power distance. In organizations, control is not so much appreciated, but direct and participative communication is valued. Employees are satisfied with expertise and leaders are expected to be experts. Decision making is not centralized to leaders, and uncertainty regarding decisions is diminished by restricted rules, procedures and by relying on expertise. Individualism (vs. collectivism) means that individuals are expected to look after themselves and their own immediate family and was found to be related to the enactment of TFL (Ergeneli et al., 2007). Collectivism is related to societies in which people are integrated in strong groups; people are committed in a long-term relationship with their groups, like the organization they work for. They care about their group and faithfulness is extremely important. The relationship between employee and employer is similar to family relations. The leaders consider the needs of the employee group. Pillai, Scandura and Williams (1999) found for Colombia, Middle East countries and India, cultures characterized by high collectivism and power distance, that leaders have more satisfied followers, showing directive and autocratic behavior, contrary to a large body of research in western contexts. Likewise, Cheng, Chou, Wu, Huang and Farh (2004) found that authoritarianism in a Chinese sample is likely to result in obedience by subordinates. Philippines is considered a collectivistic society with these characteristics. Germany is considered an individualist society in which nuclear family, based on parent-children relationship is more common with a high sense of duty and responsibility that fosters loyalty on behalf of personal preferences rather than group ones. The work relationships are based on contract and direct communication and employees are satisfied with participative leaders. Therefore, in Philippines as a collectivist and high power distance culture, employees would be more satisfied with benevolent autocrat leaders than with transformational ones. This might lead to the idea that SAT will be a criterion that in Germany relates significantly to TFL, but not in Philippine organizations.

The relationship between TFL and EXTRA EFFORT (EWEF) in both countries might be explained by long term orientation. It describes “how every society has to maintain some links with its own past while dealing with the challenges of the present and future” (Hofstede, 2018). Cultures that are more longterm-oriented promote efforts to deal successfully with future demands. Societies that are scoring low on long term orientation are looking more skeptical to future change and focus more on tradition (Hofstede, 2018) and are not encouraging effort for the future goals. The German culture points high on long term orientation meanwhile the Philippine culture points low. This might lead to the idea that EEF maybe is not a suitable criterion for transformational leaders in Philippines’ organizations and therefore there will be no significant relation between TFL and EEF in Philippines and a significant one in Germany.

The relationship between TFL and EFF in both countries might be explained by uncertainty avoidance and masculinity. Uncertainty avoidance is defined as the level members feel either uncomfortable or comfortable in unstructured situations. This feeling is expressed through stress and a need for predictability, like established rules and is related to enactment of TFL in different societies. TFL is more effective in uncertain organizational environment (Bass & Riggio, 2006; Felfe, 2006). For uncertainty avoidance, the countries' scores show few differences. Philippines is considered a medium-low uncertainty avoidance culture, valuing more practices than principles and tolerate more easily the deviation from the norm. Rules should exist only if necessary. Innovation usually happens and is seen as a good thing. The German culture points medium-high on uncertainty avoidance. Systematic planning is valued and necessary in order to act. Laws are usually detailed and well established.

The other culture dimension that might influence EFF, masculinity, is about "what motivates people, wanting to be the best (Masculine) or liking what you do (Feminine)" (Hofstede, 2018). In masculin societies, competition, achievement and success are relevant. Both countries are not differing. For the similar scores of both countries on uncertainty avoidance and masculinity we expect a similar significant relationship between TFL and EFF in both countries. Considering the findings of previous research, we establish the following hypothesis:

H1c: Concurrent criterion validity of the HSA-TFL short-scale for the Philippine sample will be different from the results obtained for the German one. We expect a significant positive relationship with all criteria for Germany, meanwhile for the Philippines we expect no significant relationship with SAT and EEF and a significant positive relationship with EFF.

Previous studies showed that it is also possible that TFL profile variations in different countries are explained by cultural differences, "particularly as one crosses into the non-Western world" (Bass, 1997, p. 136). Dickson et al. (2003) and Jung et al. (1995) argue that collectivist societies are more likely to endorse TFL behavior due to their characteristics such as respect and obedience for their leaders, that seem to stimulate the II and IS and also the sense of taking care of the group, which approximate the relationship between leader and follower and enhance the IC. This is in line with Bass (1997) and Jung et al. (1995) who discuss that collectivist societies, especially from Asia, are more likely to show a more robust profile in TFL than individualist societies. As for uncertainty avoidance, Jung et al. (1995) hypothesized that lower uncertainty avoidance cultures will tolerate more innovative and transformational behavior. When power distance is low, people tend to prefer more egalitarian leadership and when it is high, "lead-

ers tend to be less participative and more authoritarian and directive” (Dickson et al., 2003, p. 740). Germany is considered a more decentralized society, with low score on power distance. For these diverse reasons we expect relatively high, but significantly different means of TFL and II, IS, and IC in both countries and establish the following hypothesis:

H2: The MLQ-5X (TFL) profile in Germany and Philippines will show significantly different means for the dimensions II, IS and IC.

On the other hand, Leong and Fischer (2010) mention that in masculine, mastery-oriented cultures inspirational motivation might be perceived as important as these cultures see leaders more “as a source of inspiration and exemplary figure” (Leong & Fischer, 2010, p. 8). As Germany and Philippines show a similar level of masculinity, we expect also similar means for IM.

H3: The means of the MLQ-5X (TFL) dimension IM for Germany and Philippines will not differ significantly.

METHOD

Participants

The German sample consists of 200 employees, meanwhile the Philippine sample is build by 308 employees, in both countries working in diverse services (Table 2). All participants were employees without a supervisor function. Although participants’ age distribution is different in the Philippines and Germany, we used both samples as Wang, Van Iddekinge, Zhang and Bishoff (2018) in their meta-analytic article did not find an influence of followers age on leadership ratings.

Table 2
Sample characteristics

| Country | <i>N</i> | Sector | Male | Female | Age | Tenure (Mean) |
|-------------|----------|---------|-------|--------|----------------------|---------------|
| Germany | 200 | Service | 48.5% | 51.5% | 53.5% over 36 years | 8.55 years |
| Philippines | 308 | Service | 69.9% | 33.1% | 93.8% under 36 years | 5.68 years |

Instruments

Three questionnaires were answered by both samples.

The Human System Audit – Transformational Leadership short scale (HSA-TFL). The instrument is based on the Spanish short version of the HSA-TFL short-scale showing Cronbach's coefficients ranging between .92 to .95 (Berger et al., 2011) and validated in German (Kolbe, 2009). The instrument is composed of eight questions (e.g., "I am confident that s/he can surpass any obstacle"; "Ich vertraue auf seine/ihre Fähigkeiten, Hindernisse jeder Art zu überwinden"), two for each theoretical dimension using a 5-point Likert scale from 1 (*definitely do not agree*) to 5 (*completely agree*).

The Multifactor Leadership Questionnaire (MLQ-5x). This research uses only the 20 transformational items (Bass & Avolio, 1997) (e.g., "Seeks differing perspectives when solving problems") rated on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*frequently, if not always*).

The Multifactor Leadership Questionnaire (MLQ-5x), internal performance measures part. It is composed by effectiveness (EFF) with four items (e.g., "Is effective in meeting my job-related needs"), extra-effort (EEF) with three items (e.g., "Heightens my desire to succeed") and satisfaction (SAT) with two items (e.g., "Uses methods of leadership that are satisfying"), also on a 5-point Likert scale, ranging from 1 (*not at all*) to 5 (*frequently, if not always*).

For the German sample the instruments were applied in German, for the Philippines in English. This was possible because the Global English Corp institute ranked Philippines as among the highest level in business English. Nevertheless, to assure the items' full comprehension, a Tagalog version, the official language of Philippines, was provided together with the English version. Both versions passed through a careful process of translation and back-translation into German (Kolbe, 2009) and English (Berger et al., 2012) following the International Test Commission (ITC) guidelines (ITC, 2017).

Procedure

Data was collected using online survey and paper-pencil method after previous contact with the organizations in order to explain the research's objectives and assuring anonymity and confidentiality of the responses during all the process. Paper-pencil questionnaires were distributed by a consultant, answered during working hours and returned the same day by the employees in a sealed envelope.

RESULTS

Results of study 1: Psychometric properties in Germany and Philippines

Table 3 shows the descriptive statistics for HSA-TFL and MLQ-5x (TFL) in Germany and Philippines.

Table 3
Descriptive statistics of HSA-TFL and MLQ-5x (TFL) for Germany and Philippines

| | HSA-TFL | | MLQ-5x (TFL) | |
|----------------|---------|-------|--------------|-------|
| | GE | PHI | GE | PHI |
| Mean | 3.67 | 3.64 | 3.59 | 3.81 |
| Median | 3.75 | 3.62 | 3.65 | 3.85 |
| SD | 0.79 | 0.66 | 0.70 | 0.46 |
| α | .91 | .90 | .93 | .88 |
| Skewness | -0.80 | -0.79 | -0.50 | -1.75 |
| SE of Skewness | 0.17 | 0.13 | 0.17 | 0.13 |
| Kurtosis | 0.37 | 1.75 | 0.03 | 5.95 |
| SE of Kurtosis | 0.34 | .27 | 0.34 | 0.27 |

A Confirmatory Factor Analysis (CFA) using version 22 of AMOS was done to confirm the factor structure of the HSA-TFL short-scale. Considering the sample size, the extraction method used was the General Least Square (GLS), that is indicated to well-specified models and allows small sample sizes to do an acceptable job in terms of theoretical and empirical fit (Olsson, Tron, Troye, & Howell, 2000). Criteria for an acceptable fit are defined as follows: The Normed Fit Index (NFI) should be greater than .95, the Comparative Fit Index (CFI) and the Adjusted Goodness-of-Fit Index (AGFI) greater than .90, the standardized Root Mean Square Residual (SRMR) smaller than 0.8, and the Root Mean Square Error of Approximation (RMSEA) close to .06 (Byrne, 2006). Considering that the Chi-square test is known to be very sample dependent in relation to normal distribution and size and to be higher for simpler models, multiple fit indexed were used to provide a more holistic and parsimonious view (Schlermelleh-Engel & Moosbrugger, 2003; Vandenberg, 2006). Two models were tested: model 1 tested a one-dimensional structure and model 2 tested a four-factor structure.

Germany. The goodness of fit indexes for both models are similar and show satisfactory fit indexes (Table 4): NFI = .81, AGFI = .92 for the one-factor model (model 1) and NFI = .73, AGFI = .87 for the four-factor model (model 2). The SRMR for both models met the acceptable index (SRMR = .03). The RMSEA met the recommended of .06 for one-factor model but it is above this rule of thumb for the four-factor model (RMSEA = .09). The smaller value for the CAIC favored the one-factor model over the four-factor one (CAIC = 154.17 and CAIC = 177.45 for model 1 and model 2, respectively). The one-factor model demonstrated a non-significant chi-statistic ($X^2(16, N = 200) = 28.20, p > .01$), indicating a good fit. The four-factor model showed a significant chi-statistic ($X^2(14, N = 200) = 38.89, p < .01$), indicating a poor fit. Considering the Chi-square test and the fit index, the one-dimensional model better explains the factor structure of the HSA-TFL short-scale in the German sample. Inter-correlations between the dimensions II, IM, IC and IS ranged between .60 and .69. All correlations were significant at a 0.01 level (Table 4).

Philippines. The goodness of fit indexes for model 1 showed satisfactory fit indexes (Table 4): NFI = .85, CFI = .89, AGFI = .92. Both the SMRS and the RMSEA were close to the recommended of 0.6 (SRMR = .04 and RMSEA = .08) for one-factor model. Model 1 demonstrated a significant chi-statistic ($X^2(12, N = 308) = 37.71, p < .01$), which indicates a poor fit. Considering that the Chi-square test is known to be very sample dependent in relation to normal distribution and size, this index is not considered to further analysis. Therefore, the model 1 was considered appropriate with regard to the description of the data. Inter-correlations between the dimensions II, IM, IC and IS ranged between .38 and .76. All correlations were significant at a .01 level (Table 4). Model 2 showed the following indexes (Table 4): NFI = .70, CFI = .73, AGFI = .84, SMRS = .04 and RMSEA = .11) and a significant chi-statistic ($X^2(14, N = 308) = 74.34, p < .01$), which indicates a poor fit. Furthermore, the four-factor model tested presented some Heywood cases, with negative correlations between some factors, which is not acceptable for the fit of the model and led to the rejection of the four-factor model for this sample. In both samples, the model 1 fit index is reported after modifications in order to achieve better fit. This is in line with literature about CFA using AMOS (Olsson et al., 2000). Model 2 was not suitable for modifications suggested by the software due to the risk of theoretical violations. The one-dimensional model therefore fits better for both samples.

Table 4
Goodness of fit index for the HSA-TFL short-scales' factor structure

| | | X ² | p | df | NFI | CFI | AGFI | SRMR | RMSEA | CAIC |
|---------|----------------------|----------------|-------|----|-----|-----|------|------|-------|--------|
| Germany | Model 1 ^a | 28.20 | > .01 | 16 | .81 | .89 | .92 | .03 | .06 | 154.17 |
| | Model 2 | 38.89 | < .01 | 14 | .73 | .79 | .87 | .03 | .09 | 177.45 |

| | | | | | | | | | | |
|-------------|----------------------|-------|-------|----|-----|-----|-----|-----|-----|--------|
| Philippines | Model 1 ^a | 37.71 | < .01 | 12 | .85 | .88 | .90 | .04 | .08 | 199.22 |
| | Model 2 ^b | 74.34 | < .01 | 14 | .70 | .73 | .84 | .04 | .11 | 222.40 |

Notes. Model 1 reflects the one-dimensional construct for TFL. Model 2 reflects a first order four-dimensional. ^a In both samples, Model 1 was adjusted inserting correlations between errors. ^b Model 2 in Philippines is not admissible as it has Heywood cases. The X2/DF score is 3.14 which is seen as acceptable.

Internal consistency for the HSA-TFL short-scale and MLQ-5X (TFL) in both countries is good with similar Cronbach’s alpha. For the German HSA-TFL short-scale Cronbach’s alpha is .91 and inter-item correlation ranges from .46 to .69. For the German MLQ-5X (TFL) Cronbach’s alpha is .93 and inter-item correlation lays between .19 and .68. The Philippine HSA-TFL short-scale has a Cronbach’s alpha of .90 and the inter-item correlation ranges from .36 to .73. For the MLQ-5X (TFL) in Philippines, the Cronbach’s alpha is .88 and the inter-item correlation is between -.041 and .72.

Significant correlations between HSA-TFL short-scale and the MLQ-5x (TFL) show in both samples convergent validity with lower results in the Philippines sample ($r = .32, p < .01$) then in Germany ($r = .78, p < .01$). The same is true for the TFL subdimensions (Table 5).

Table 5
Inter-correlations of the HSA-TFL short-scale and the MLQ-5X (TFL) per dimension

| | HSA II | HSA IM | HSA IS | HSA IC | MLQ IC | MLQ IS | MLQ II | MLQ IM | HSA-TFL | MLQ-5X (TFL) |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------------|
| HSA II | - | .67** | .61** | .60** | .55* | .51** | .66** | .49** | .83** | .65** |
| HSA IM | .69** | - | .69** | .63** | .64** | .65** | .71** | .50** | .86** | .72** |
| HSA IS | .52** | .60** | - | .64** | .60** | .66** | .65** | .51** | .86** | .69** |
| HSA IC | .38** | .50** | .76** | - | .61** | .58** | .62** | .48** | .84** | .66** |
| MLQ IC | .30** | .22** | .19** | .20** | - | .74** | .72** | .49** | .69** | .85** |
| MLQ IS | .30** | .21** | .15** | .16** | .60** | - | .73** | .61** | .69** | .86** |
| MLQ II | .20** | .40** | .24** | .21** | .45** | .29** | - | .72** | .76** | .93** |
| MLQ IM | .27** | .28** | .30** | .25** | .50** | .40** | .62** | - | .58** | .78** |
| HSA-TFL | .76** | .83** | .85** | .79** | .24** | .21** | .28** | .29** | - | .78** |
| MLQ-5X(TFL) | .32** | .37** | .27** | .24** | .77** | .64** | .84** | .77** | .32** | - |

Note. ** $p < .01$, two-tailed. Correlations above the diagonal represent the Germany sample and below the Philippine sample.

To test criterion validity, the HSA-TFL short-scale is correlated to the outcomes EEf, EFF and SAT measured by the MLQ-5X in both samples, showing good and similar alphas (Germany: .89; Philippines: .93). For the German sample all correlations are significant and indicate good criterion validity (Table 6). For the Philippine’s sample,

only the performance indicator EFF correlates significantly with HSA-TFL short-scale. Criterion validity in Germany and Philippines differs regarding to the criteria.

Table 6
Correlations between the performance indicators and the HSA-TFL and MLQ-5x (TFL)

| | EEF | EFF | SAT | HSA-TFL | MLQ-5X (TFL) |
|--------------|-------|-------|-------|---------|--------------|
| EEF | - | .56** | .64** | .56** | .70** |
| EFF | .86** | - | .72** | .67** | .66** |
| SAT | .82** | .77** | - | .73** | .75** |
| HSA-TFL | .10 | .13* | .06 | - | .78** |
| MLQ-5X (TFL) | .46** | .46** | .49** | .32** | - |

Note. * $p < .05$; ** $p < .01$, two-tailed. Correlations above the diagonal represent the Germany sample and below the Philippine sample.

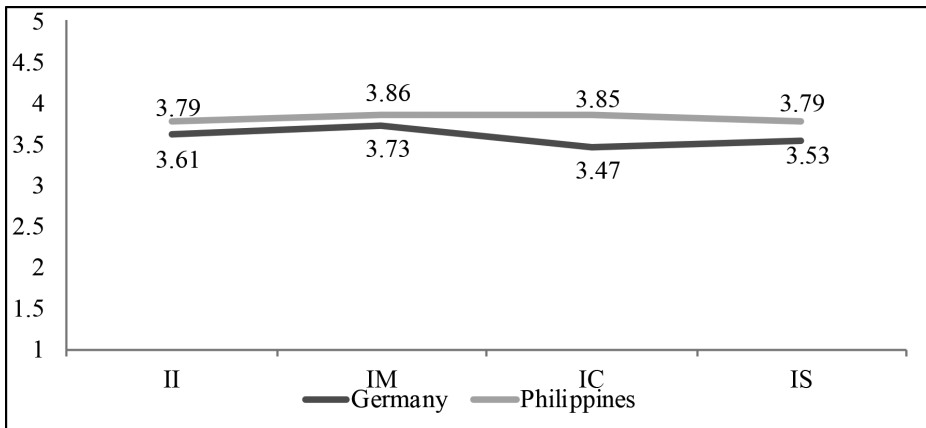


Figure 1. Transformational Leadership profile as measured by the MLQ-5X in Germany and Philippines. Note. II (Idealized Influence), IM (Inspirational Motivation), IC (Individual Consideration), IS (Intellectual Stimulation). Mean scores presented according the four dimensions, based on a likert scale ranging from 1 to 5.

Results of study 2: comparison of TFL profiles in Germany and Philippines

To get a deeper insight, TFL profiles were compared between countries using the responses obtained with the MLQ-5X (TFL), that shows a four-factor structure, applying Mann-Whitney U test (Morgan, Leech, Gloeckner, & Barrett, 2004). Results show that the overall mean of the MLQ-5X (TFL) in Germany and Philippines is significantly different

being higher in Philippines than in Germany ($U = 24440, p = .001$) and the same is true for the three sub-dimensions IC ($U = 23167, p = .001$), IS ($U = 23817, p = .001$) and II ($U = 26572, p = .001$). However, IM ($U = 29235, p = .32$) shows no significant difference (Figure 1).

Discussion of the results of study 1

The CFA revealed in both countries a one-dimensional factor structure of the HSA-TFL short-scale supporting H1a. This fits to other results (Antonakis et al., 2003; Berger et al., 2011, 2012; Kolbe, 2009; Rowold, 2005; Sheer, 2010). Furthermore, high internal consistency and significant convergent validity with MLQ-5x (TFL) was found for both countries, supporting H1b and in line with other results. For criterion validity of the HSA-TFL short-scale, differences were found between both countries as for the German sample good criterion validity was found for all criterion, but for the Philippine sample a significant correlation was only found for EFF. This is in line with previous studies in different cultural contexts that showed the positive and significant relationship between this outcome and TFL (Avolio, 2011; Braun et al., 2013). SAT and EEF did not correlate significantly with the HSA-TFL short-scale in Philippines indicating the influence of culture (Spreitzer et al., 2005). SAT is related to the way followers feel satisfied with their leaders' behavior. No significant correlation with this outcome was found in the Philippines coinciding with other results in collectivistic societies with high power distance (Cheng et al., 2004; Pillai et al., 1999) where directive and autocrat leadership behaviors seem to be more important.

Regarding EEF, in which followers evaluate whether their leaders stimulate them to do more than expected and increases their willingness to try harder, the non-significant correlation between TFL and EEF in the Philippines may be explained by its low score on long term orientation. A culture with a low level on long term orientation seems not to encourage efforts for future (Hofstede, 2018). Results support H1c.

The HSA-TFL short-scale can be considered a psychometrically sound measure in both countries, showing the sensibility to cultural differences related to performance criteria.

Discussion of the results of study 2

The overall mean as well as the means of the four subdimensions are higher for the Philippines' sample than for the German one. This fits to Bass (1997)

and Jung et al. (1995) who mention that collectivist societies from Asia show a more robust profile in TFL than individualist societies. The comparison of the means of the MLQ-5X (TFL) and of its subdimensions showed significant differences in three of the four subdimensions: II, IS and IC differ significantly across both countries, being higher in Philippines. Collectivism might have an influence in the Philippines society in the sense that employees feel significantly more II, IS and IC than in Germany due to respect for their leaders (Dickson et al., 2003). Results support our H2. Only IM was found to be similar in both countries. Along with Leong and Fisher (2010) the similar scores on masculinity might have an influence here. As hypothesized, IM is perceived in a similar way in Germany and Philippines, both cultures with a similar level of masculinity that consider the leader as the source of mastery and inspiration. Our results support H3.

Results are in line with other studies that suggested that differences in the TFL score can happen because of cultural differences (Spreitzer et al., 2005).

Implication for theory

This research adds evidence for the HSA-TFL short-scale in Philippines offering a short and reliable instrument that can be used for a combined assessment of quality-related organizational aspects. Moreover, this research also contributes to theory in cross-cultural studies as it provides empirical evidence about TFL profiles in two different cultures using the Short-scale. This in line with Aycan, “cross-cultural studies are necessary to test the external validity of leadership theories that have been developed in a single context by identifying ‘universal’ as well as ‘culture-specific’ traits, behaviors, and influence processes in leadership” (2008, p. 220). Additionally this research provides an insight in the culture-sensitivity of the TFL concept at sub-dimension level.

Implications for practice

In terms of practice, results suggest a valid and reliable instrument to measure TFL, particularly for the Philippines context, that is short and quick to apply, saving up time and resources of organizations (Quijano et al., 2008). Moreover, our research also offers information at sub-dimension level for German and Philippine TFL profiles for the design of training programs for expatriate managers (Mittal, 2015; Muenjohn & Armstrong, 2007; Thomas et al., 2005). Knowing the possible

profile of the transformational leaders in Philippines can be useful for the design of training programs for German leaders in process of being expatriated to work in Philippines' companies.

Limitations and future research

This research is not without limitations. Results can be influenced by sample characteristics. Also, in this research, age mean was statistically significant comparing both samples, we follow Wang et al. (2018) that found in their meta-analytic article that follower age was not related to their ratings of leadership behaviors. Nevertheless, data with more variability on demographics could be used in future studies in order to overrule possible effects of sample characteristics on the results. Measurement invariance according Byrne (2006) was not tested in this study. Future research should investigate the measurement invariance of the HSA-TFL short-scale in German and Philippine context in order to get a deeper insight in the cross-cultural sensibility of the instrument. Interpretation of the TFL profile in both countries was done in a theoretical way. Future research should collect data on culture dimensions that would provide a deeper insight and more explanation over the results. Another possible explanation for the difference could be the organizational structure of companies in both countries that was not included in the analysis. In the future, structure-related information should be collected to allow a better understanding of possible impacts of organizational structure on TFL and outcomes.

CONCLUSION

All the hypothesis were confirmed. Our results show that the HSA-TFL short-scale is a reliable and valid instrument for the Philippine context. The relationship to TFL performance outcomes was found to be sensible to cultural characteristics and helps to shape the transformational leadership behavior. The TFL profile as measured by the MLQ-5X (TFL) revealed some differences at subdimension level between Germany and Philippines as representatives of western and eastern cultures, respectively. Cultural differences could explain these results. The short-scale can serve as a first measurement of TFL, especially for practical interest in order to have a first comprehension of tendencies in TFL to design human resource policies and projects.

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