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Here, there, & everywhere: Development and validation of a cross-culturally representative measure of subjective career success

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Here, There, & Everywhere: Development and Validation of a Cross-Culturally Representative Measure of Subjective Career Success

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In some ways career success has become a "Holy Grail" to scholars in the careers field and beyond (Gunz & Heslin, 2005; Ng, Eby, Sorensen, & Feldman, 2005; Seibert, Kraimer, & Liden, 2001). Career success is a tantalizing construct because it can unlock people's true internal standards and aspirations and holds keys to motivation and satisfaction, performance, and commitment (Abele & Spurk, 2009; Dries, Pepermans, & Carlier, 2008; Heslin, 2003). It thus embodies a theoretical construct that allows us to assign meaning to, and measurement of our own and others' careers (Dries, 2011; Heslin, 2003).

Conceptually, the distinction between objective and subjective career success has received most attention, especially in terms of definition and measurement (e.g., Abele & Spurk, 2009; Arthur, Khapova, & Wilderom 2005; Gunz & Heslin, 2005). Whereas objective career success is defined as directly observable by others and measurable in a standardized way (i.e., position title, promotions, salary growth; Gunz & Heslin, 2005), subjective career success is a career actor's evaluation and experience of achieving personally meaningful career outcomes (Ng et al., 2005; Seibert, Kraimer, & Liden, 2001). In older research, career success was predominantly operationalized using objective measures (Gunz & Heslin, 2005). In recent years, however, there has been a shift of research interest such that subjective measures are now at least equally, if not more, used (Spurk, Hirschi, & Dries, 2019).

In empirical research, subjective career success has typically been measured as unidimensional career satisfaction (Greenhaus, Parasuraman, & Wormley, 1990; Seibert, Kraimer, Holtom, & Pierotti, 2013) or perceived career success (Heslin, 2003; Turban & Dougherty, 1994).[i] This type of 'objectivist' measures of subjective career success—in which respondents rate their satisfaction with researcher-imposed, assumed to be universal criteria of success (Gunz & Heslin, 2005)—has remained the norm until recently. Over the past few years, however, there has been a shift towards developing more fine-grained measures that might accommodate more idiosyncratic definitions of subjective career success,

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and help to answer more nuanced research questions. For example, in China, Zhou, Sun, Guan, Li, and Pan (2013) developed a multidimensional scale including dimensions of external compensation and intrinsic fulfillment. Later, in the United States, Shockley, Ureksoy, Rodopman, Poteat & Dullaghan (2016) published a multidimensional measure of subjective career success, including dimensions such as growth and development, personal life, and authenticity.

We build on Zhou et al. (2013) and Shockley et al. (2016) by directly asking research participants about the criteria by which they evaluate their own career success, rather than predefining those criteria based on the literature (i.e., a 'subjectivist' approach to scale development; Gunz & Heslin, 2005). In a first step of the research project—which spanned multiple years and four phases—we interviewed respondents from all over the world asking them to define, in their own words, what career success meant to them (Anonymous 1; Anonymous 2). In a second step, we used these meanings as input to generate our item pool. In addition, we developed a dual-response format allowing respondents to rate both the perceived importance and achievement of each item. In doing so, we built on decades of research and theorizing from the life satisfaction and quality of life literature (Solberg, Diener, Wirtz, Lucas, & Oishi, 2002). Although rarely referenced in the careers literature, these research streams have a long and rich tradition examining the exact factors that make people feel more or less satisfied with their lives (Erdogan, Bauer, Truxillo, & Mansfield, 2012). The development and psychometric evaluation of dual-response format scales is also an important topic in this literature (Wu & Yao, 2006), as is comparative research on country differences in life satisfaction (Saris, Veenhoven, Scherpenzeel, & Bunting, 1996)—all of which are highly relevant for the purposes set forward in the present paper.

The key gap that the present paper seeks to address is the single-country focus of most studies on career success to date (Mayrhofer, Smale, Briscoe, Dickmann, & Parry, 2020), including the studies that have advanced measurement of subjective career success (Greenhaus et al., 1990; Zhou et al., 2013;

Shockley et al., 2016; Turban & Dougherty, 1994). Although the recently developed multidimensional measures of subjective career success have, without a doubt, moved the field forward (Zhou et al., 2013; Shockley et al., 2016), they were each developed within a single-country setting. It remains unclear to what extent a single country's meanings of career success can adequately capture other countries' meanings (Henrich, Heine, & Norenzayan, 2010). Beyond construct validity considerations, country-specific measures may also not perform universally across different cultural contexts, for instance in terms of measurement invariance (Asparouhov & Muthén, 2014).

From recent research, we know that the way people organize career success meanings in their mind—their career success schemas—differ across country contexts (Kaše et al., 2020). Therefore, using a scale developed in any single culture and replicating it to see if it is reliable in other cultures likely falls short of what is required for measuring phenomena that are inherently subjective and culturally sensitive (Henrich et al., 2010). For example, the subjective success meaning of "calling" has been outlined by Dik and Duffy from an admittedly Western perspective (2009), with references of religion or deity. Yet in a qualitative study Zhang, Dik, Wei and Zeng (2014) in China uncovered four dimensions of calling or 'guiding force' with labels such as duty, meaning and purpose, altruism, and active behavior. This is just one example of how subjective career success meanings might vary across cultures. This single example of calling demonstrates how different societies can have similar labels and constructs for career success meanings, yet not mean the same thing.

In order to validly compare subjective career success across cultures, then, a robust culturally invariant measurement instrument is needed. In what follows, we theorize country differences in importance attached to different possible meanings of career success based on social representation theory (Moscovici, 1963). Country differences in satisfaction, in contrast, can be explained by

(competing) theories borrowed from comparative life satisfaction research, such as livability theory and folklore theory (Saris et al., 1996).

In what follows, we first review the literature on subjective career success measurement and validation, and then present a comprehensive multi-study scale validation process across a variety of cultures based on the Schwartz/GLOBE cultural clusters (House, Hanges, Javidan, Dorfman, & Gupta, 2004; Schwartz, 1994) that allowed us to develop a new, globally valid measure of subjective career success. In Phase 1, building on a qualitative study of career success, we construct and refine a list of discrete career success meanings sourced from interviews in 11 countries. In Phase 2, we examine career success schemas of participants from 13 countries to develop a hypothetical basis for the factor structure of our measure. In Phase 3, we optimize and validate the multidimensional structure of our scale in a sample of 16 countries, and establish its convergent and discriminant validity. Finally, in Phase 4, we replicate the validation process of the scale again on a new sample of 20 countries, adding analyses of measurement invariance, between-country differences, a test of criterion validity, and an exploration of the interaction effects between the importance and achievement scores for the different dimensions of our measure.

The resulting scale—i.e., the 'Dual Aspect Importance & Achievement Career Success Scale' (DAIA-CSS)—is not only a measurement instrument that addresses remaining issues in the measurement of subjective career success; it should also be seen as a vehicle for identifying and addressing new theoretical questions about subjective career success. We offer specific avenues for future research, made possible by our subjectivist and globally valid measure of subjective career success, in the Discussion.

Measuring Subjective Career Success

The most often-used measure of subjective career success (SCS), by far, is the Career Satisfaction Scale (CSS) developed by Greenhaus, Parasuraman, and Wormley (1990). A recent review (up until 2016) found that the scale has been used in 68 published studies on career success. These studies typically looked at antecedents of career satisfaction, most notably organizational and career self-management strategies, career attitudes, personality traits, and socio-demographic characteristics (Spurk et al., 2019). In the CSS, respondent scores on five items—referring to general career satisfaction, progress towards career goals, level of income, advancement, and skill development, respectively—are averaged out into a single score. The measure has overall demonstrated high internal consistency (Cronbach's alpha), although one study found that measurement invariance was potentially an issue, and that only the "general" item (i.e., "I am satisfied with the success I have achieved in my career") demonstrated optimal psychometric properties (Hofmans, Dries, & Pepermans, 2008). Nonetheless, the scale is generally considered the best available unidimensional measure of subjective career success. It is, however, not suited for addressing more nuanced research questions concerned with the multiple, idiosyncratic ways in which people evaluate how successful they feel their careers have been (Dries et al., 2008).

The Emergence of Multidimensional SCS Measures

By "unidimensional" measures we refer to scales that average out respondent scores over a series of items or factors to form one global assessment of subjective career success. Although such short measures certainly have value (i.e., they are robust, efficient, and easily adopted by researchers from outside of career studies looking to include a career variable), they are not suitable for every type of research question. From interview studies and career development practice—and even daily life—we know that people are typically satisfied with some aspects of their careers (e.g., their level of income), but not others (e.g., their work life-balance). In fact, in many cases, it is theoretically more interesting to study relationships between certain variables and distinct meanings of subjective career success as

separate dependent or independent variables, predicting or being predicted by different sets of variables (Abele & Spurk, 2009). In so doing, the distinction between objective and subjective career success is likely to become much clearer to researchers and practitioners alike—a key limitation of existing studies on objective and subjective career success being that identical hypotheses are generally tested for both constructs, although they are widely acknowledged to be conceptually distinct and only moderately correlated (Dette, Abele, & Renner, 2004; Ng et al., 2005). In other words, some aspects of subjective career success may be more strongly related to measures of objective career success than others (Spurk et al., 2019). In addition, multidimensional scales allow researchers to analyze the extent to which different career success facets or factors "weigh" on an individual's overall subjective career success—representing a subjectivist approach to career success that has long been advocated by prominent scholars in the field (Gunz & Heslin, 2005).

Over the past years, we have witnessed the development of more nuanced subjective career success measures that look at multiple dimensions (Zhou, Sun, Guan, Li, & Pan, 2013; Pan & Zhou, 2015; Shockley et al., 2016). For example, Zhou and colleagues (2013; Pan & Zhou, 2015) identified three broad dimensions of subjective career success for China: intrinsic fulfillment, external compensation, and work-life balance. Later, Shockley and colleagues (2016), based on samples from the United States, proposed and validated a scale that featured the following dimensions: recognition, quality work, meaningful work, influence, authenticity, personal life, growth & development, and general satisfaction. Within their respective cultures, these scales reportedly provide robust reflection of the local population's career success meanings. However, they feature several important differences, which make cross-cultural comparison and multi-site research (e.g., in case of an MNC operating in both countries) problematic. For example, Zhou et al. (2013) found a success meaning of taking care of family, which emerged from qualitative interviews in China, but the same meaning did not emerge in the United States in the Shockley et al. (2016) study. Conversely, in the U.S. study, the qualitative data included

reference to career 'calling', which was not present in the Chinese study. Therefore, to facilitate comparative careers research, we argue that a culturally invariant, multidimensional, subjectivist career success scale would be the next step forward.

Towards Subjectivist, Dual-Format SCS Measures

In addition, beyond looking at subjective career success in a multidimensional manner *across* cultures, we argue that measurement of subjective career success should be (explicitly) anchored in how important a certain meaning of career success is to a person (Gunz & Heslin, 2005). James' (1890) original text on psychology already referred to the reality of people defining their own standards and paths and assessing themselves according to these. Later Lewin (1936) discussed success relative to aspiration levels, upon which others (Hall & Foster, 1977) would subsequently base their construct of 'psychological success', measured as progress towards personally meaningful career goals. In the last forty plus years momentum has been building for subjective career success, as protean (i.e., values-driven and self-directed; Hall, 1976; Hall, 2002) and 'boundaryless' (i.e., inter-organizational both in terms of physical mobility and psychological mindset; Arthur, 1994) career archetypes emerged that emphasized idiosyncratic success.

People can be driven by certain aspirations without feeling fulfillment in that area; alternatively, they may experience high achievement on a certain dimension without attaching relatively greater importance (Argyris, 1982; Katz & Kahn, 1978). Consider the example of a person who finds wealth very important but does not (yet) feel satisfied with their achievement level for this dimension of career success. A second person, in contrast, is perfectly happy with their achieved level of wealth, but does not value it that much, calling into question how strongly this career success factor will drive the individual's behavior. In either of these cases, knowing the reality of the contrasting feelings of success

for a particular career dimension ('importance' versus 'achievement') would give us more information as researchers than simply knowing if the person was satisfied with their career success, if they felt they had achieved a certain level of career success, or which dimension of career they found important. We thus believe that both aspects are important for understanding any given person's subjective career success.

However, achievement and importance of career success meanings have been addressed by separate streams of research. While career success as satisfaction or achievement is a well-established intellectual domain in careers research (e.g., Greenhaus et al., 1990; Turban & Dougherty, 1994; Seibert et al., 2001), the importance of various career success meanings is less frequently addressed. Schein's career anchors (1978) and related work in the work values domain (Schwartz, 2004; Judge & Bretz, 1992) represent the foundation for examining the importance aspect of subjective career success.

In the literature on life satisfaction and quality of life, an integrated perspective does in fact exist. The dominant theoretical framework for understanding the relationship between the importance attached to, and satisfaction experienced with different domains of life is multiple discrepancies theory (Michalos, 1985). Simply put, this theory states that global life satisfaction is a function of the match between subjective preferences and objective conditions across different domains of life. Studies in this area have found that 53% of the variance in life satisfaction scores can be attributed to "discrepancies between what one wants and what one has" (Solberg et al., 2002, p. 736). Another important theoretical assumption within this research area has been the range-of-affect hypothesis (Locke, 1976), which states that people will report a wider range in satisfaction scores for life domains they find more important.

In addition to offering unique insights about measurement of differential domain satisfaction, the life satisfaction literature also has a tradition of country-comparative research (Erdogan et al., 2012).

Interestingly, this stream of research offers suggestions for theorizing differences in satisfaction across countries (Saris et al., 1996), a perspective that is so far largely missing from the careers literature. Differences in importance of different dimensions of career success, in contrast, are currently already better understood in the careers literature (Briscoe, Hall, & Mayrhofer, 2011; Savickas & Porfeli, 2012; Lyness & Judiesch, 2008), as discussed below.

A Cross-Cultural Perspective on Subjective Career Success

Many current empirical tools in management and organizational research may be problematic when it comes to using them to compare phenomena across cultures, since most measures have been developed in single (typically Western) cultures. The problem lies in the overrepresentation of the *WEIRD* perspective; indeed, measurement development for the subjective career success construct, like much other social science research, has been done mostly in *W*estern, *e*ducated, *i*ndustrialized, *r*ich, and *d*emocratic countries (Henrich et al., 2010).

Variations in values at the level of countries and cultures (see Hofstede, 1984; Schwartz, 2006)—such as individualism versus collectivism and egalitarianism versus hierarchy—have been shown to relate to different goals and outcomes. For example, Confucian cultures place more emphasis upon work ethic and tradition (Hofstede & Bond, 1988). Protean and boundaryless careers, in contrast—while accepted career *gestalts*—are primarily representative of highly individualistic, agentic, and largely Western cultures (Inkson, 2006). Too often the West is overly represented on theoretical and empirical constructs, which results in conceptualizing and measuring phenomena from a decidedly non-native point of view in other regions (Dries, 2011; Stead, 2004).

In order to tackle the research gaps of unidimensionality, cultural bias, and objectivism, scholars in careers (Briscoe et al., 2011; Savickas & Porfeli, 2012; Lyness & Judiesch, 2008) and other domains engaging in international and comparative research have turned to a 'decentered' (Leung, 2008) or 'N-

Way' (Brett, Tinsley, Janssens, Barsness, & Lytle, 1997) approach, in which the perspectives of researchers from participating cultures are carefully sought and considered in identifying and defining the research questions, key variables, etc. This is contrasted with a 'one-way' approach in which an established hypothesis or theory would be applied in a similar fashion across country samples.

In the N-way approach, country teams take turns leading in a collaborative cross-cultural effort, based on a local model of the phenomenon under investigation. This approach emphasizes multicultural consultation at the earliest phases of the research so that cultural bias, that is more likely with a one-way approach, can be minimized. According to Leung's (2008) review of the literature on bias in cross-cultural research, this issue cannot be resolved by simply adapting the factor structure or characteristics of an existing scale when using it in another country. That is a truly 'inclusive' perspective on scale development requires cross-cultural collaboration from the item pool generation stage onwards—it is very difficult to remedy cultural bias of a measurement scale when its item pool is already set in stone. Leung (2008) further cites research showing that adapted scales are less likely to capture local phenomena than indigenous scales (Farh, Cannella, & Lee, 2006).

Cultural Differences in Importance Attached to Career Success Dimensions

To account for these realities, we need to understand how individuals and societies make meaning differently (or at times similarly). In developing the items used in the GLOBE study Hanges and Dixon (2004) proposed that culturally and societally endorsed implicit leadership theories were convergent-emergent constructs (Kozlowski & Klein, 2000). As Hanges and Dixon explain:

> These constructs are convergent because the responses from people within organizations or societies are believed to center about a single value usually represented by scale means. They are called emergent because even though the

> origin of these constructs area function of the cognition, affect, and personality of the survey respondents, the properties of these constructs are actually manifested at the aggregate- or group- (e.g., organization or society) level of analysis (Hanges & Dixon, 2004: 124).

In line with the above, we argue that individual meanings of subjective career success are a sociocultural construct and not just an individual construct. This implies that subjective career success meanings must be assessed in the cultural contexts in which they have emerged. If this can be achieved on a wide scale, across cultures, it would then be possible to carefully extrapolate through statistical means which meanings might be held in common, as first reflected from the cultures, and then validated and tested across several cultures.

We can further understand sociocultural meanings of subjective career success using social representation theory (Moscovici, 1963) in which a 'social representation' is the collective elaboration "of a social object by the community for the purpose of behaving and communicating" (Moscovici, 1963: 251). Social representations refer specifically to values, ideas and practices with a dual function; first, to establish an order which will enable individuals to orient themselves in their material and social world and to master it; and second to enable communication to take place among the members of a community by providing them with a code for social exchange and a code for naming and classifying unambiguously the various aspects of their world and their individual and group history (Moscovici, 1973). In the process of objectification, which is central to social representation theory, an abstract concept is turned into something more concrete, as the concept itself becomes part of the day-to-day context of societal members (Moscovici & Hewstone, 1983). Social representations, then, are constantly converted into social reality while continuously being re-interpreted, re-thought, and re-presented based on lived experience (Wagner & Hayes, 2005). Without understanding and documenting how

career success dimensions are seen in individual countries and regions, we cannot be sure that when we are measuring meaning "x" in Country A, we are measuring the same thing that was found in Country B.

Cultural Differences in Satisfaction with Career Success Dimensions

While social representation theory explains why people from different cultures may find one meaning of career success more important than others, it does not help explain why people in some countries may be more *satisfied* with their careers than people in other countries. We turn to the life satisfaction literature for theories that could explain differences in satisfaction between countries (Saris et al., 1996).

Comparative studies of life satisfaction have typically worked with competing hypotheses to test and explain country differences. One of the most large-scale examples of this approach was the country-comparative study by Veenhoven (1996) that tested three competing perspectives. A first perspective was comparison theory, which assumes that life satisfaction is a function of mental calculus, in line with the multiple discrepancies theory explained earlier (Michalos, 1985). As comparison standards are subjective and ever-changing, this means that countries with higher standards may report lower satisfaction, even when objective living conditions are similar to (or even better than) those in countries with lower comparative standards for satisfaction. A second perspective was folklore theory, which holds that life satisfaction is determined by a country's outlook on life; a 'national character' of sorts that implies that some countries are simply 'happier' than others, largely independently from objective conditions (Helliwell, Huang, & Wang, 2019). A third perspective was livability theory, which assumes that subjective life satisfaction is predominantly driven by objective indicators of quality of life in a country. To the researchers' surprise, evidence from a ten-country European study found that objective standards of living had the strongest influence on life satisfaction, as proposed by livability theory (Veenhoven, 1996). It remains unclear to what extent such findings would apply to the careers domain,

as well, as our study is among the first to run a country-comparative test of both the importance and achievement aspects of subjective career success.

Methods and Results

In this section, we describe the development and validation process of the Dual Aspect Importance & Achievement Career Success Scale. The resulting scale, and the process used to develop it, represent our response to the current state of the art of the literature around the measurement of subjective career success.

Phase 1: Cross-Cultural Item Generation

The aim of Phase 1 was to develop a broad, cross-culturally inclusive list of subjective career success meanings representative of a broad range of views on the meaning of career success. A stratified, theory-based sampling approach was adopted. Data were gathered from respondents in 11 countries. These spanned Schwartz's (1994, 2006) cultural regions: Africa/Middle East, Confucian Asia, Eastern Europe, English Speaking, Latin America, South Asia, and Western Europe.[ii] The sampling strategy prescribed within-country balance between male and female interviewees, as well as early and late-career career stage interviewees. The early career stage sample was comprised of people who had worked at least two years in their post training/educational stage but were otherwise in the first ten years of their careers. Late career stage interviewees were defined as being in their last ten years before anticipated retirement. An explicit goal was to represent and contrast major occupational groups that exist in most countries around the world (i.e., nurses, blue-collar workers, and business graduates).

Intensive semi-structured interviews were conducted with a total of 226 people from 11 countries—18 to 28 interviews per country—which lasted on average 45 minutes and were completed in one sitting. Interviews were recorded, transcribed, and content-analyzed (see Anonymous 1; Anonymous 2). As one part of the interview, which also examined career histories, including transitions,

along with deviations from initial career plans and aspirations, a list of relevant career success meanings for the scale development was derived from respondents' answers to the question: "Looking back at your experience and your career thus far: what does 'career success' mean to you?" Respondents' explicit statements about subjective career success served as raw data for the items pool generation. This led to a list of 76 distinct meanings of subjective career success such as "Career success is…experiencing enjoyment and fun in my career." From this list, overly vague or redundant items were eliminated which resulted in a final list of 63 items.[iii]

Phase 2: Developing a Tentative, Cross-Culturally Valid Factor Structure for the Dual Response Format

In Phase 2, we built on the list of subjective career success meanings developed in Phase 1 to produce a cross-culturally robust factor structure for measuring subjective career success. At this stage of the project, we were primarily interested in how people organize career success meanings in their minds. So instead of directly asking our research participants about the extent to which they were satisfied with a specific career success meaning and how important they were to them, we asked them which of the 63 meanings were part of the same cluster to map out their mental representations of career success meanings. Therefore, instead of the more commonly used combination of survey research and exploratory factor analysis (EFA) we opted for a combination of a card sorting task (see Block, 1978) and cultural domain analysis (Borgatti & Halgin, 2011) to establish the proposed dimensionality of our scale. This methodological approach was instrumental for the development of the dual-response format, with respondents rating each dimension on importance and achievement simultaneously, later in the process of scale development. Performing separate EFAs for both aspects of the scale early on in the scale development process was not an acceptable option, as such a process would likely result in disparate factor structures for the two response formats—whereas it was an explicit goal for our scale to measure both aspects jointly.

Therefore, we decided to develop a tentative factor structure based on mental representations of subjective career meanings across cultural clusters using cultural domain analysis. Cultural domain analysis captures respondents' (shared) views about which items are of the same type or category (Borgatti & Halgin, 2011). In our case, we explored which career success meanings respondents across cultures saw as representing shared identifiable career success dimensions. We knew that career success schemas differ across country contexts (see Kaše et al., 2020), and so—consistent with the principles of the N-way approach (Leung, 2008)—we were attentive to country-level schemas, and strived to establish an aggregate, shared representation of (dis)similarity of career success meanings across countries.

To extract individual mental representations of career success meanings we used an electronically mediated online card sorting procedure. Card sorting (see the Supplement for a more in-depth description of the method) is a qualitative technique, where selected respondents organize a set of cards featuring specific terms or items into groups of their choice and label them accordingly (see Block, 1978; Dries et al., 2008). We designed a special online tool and pretested it on a sample of 18 subject matter experts (i.e., international academics from careers, HR, OB, and related fields, who were all members of our project consortium). Using a computer interface, individual respondents were asked to visually arrange the 63 items into groups of career meanings that they felt belonged together and label the emerging categories of meanings accordingly. There was no reference to participants' own careers during the task, the card sorting should thus be interpreted as embedded in respondents' (country-specific) cognitions. Allocations of items into categories were used to estimate the similarity among items, which served as a basis for determining the tentative factor structure.

Consistent with our aim of developing a cross-culturally robust factor structure, for Phase 2 we recruited participants from 13 countries covering all of Schwartz's (2006) cultural regions (i.e., Belgium, Brazil, China, France, Greece, India, Italy, Nigeria, Norway, South Korea, Slovenia, Turkey, and the USA).

Our intention was to achieve as much heterogeneity as possible within each country sample, while safeguarding comparability across countries. Therefore, we adopted a stratified sampling strategy, where each country sample included data from 28 employed individuals with at least 5 years of work experience covering all 7 occupational types in the Campbell (1987) Interest typology (e.g., influencing, creating, analyzing,… occupations). The final sample included 364 individuals. 47% of respondents were women, on average they were around 40 years old, and had 16 years of work experience; more than 54 % were white-collar workers and on average they held a bachelor's degree or equivalent (See full details in the Supplement, Table 3).

Individuals' sortings of career success meanings were aggregated using a co-occurrence logic. Specifically, when two career success items were put together in the same category by a respondent they counted as one co-occurrence. The higher the number of respondents who sorted two items into the same category, the stronger the co-occurrence between the two items. Consistent with the inclusiveness of the N-way approach we analyzed both country-level and global representations of career success. All participating countries were given equal weight in the development of the global representation (See Supplement, Figures 2 & 3 for two examples).

We then performed a subgroup identification analysis (De Nooy, Mrvar, & Batagelj, 2011). Based on co-occurrence levels we identified tentative clusters of career success meanings and excluded 11 items due to their presence in multiple clusters or lack of connection to any other item or cluster. The remaining 52 items were entered into a hierarchal clustering procedure, which based on our evaluation of the dendrogram returned 14 clusters of career success meanings (see Supplement, Figure 4 for dendrogram plot and Table 4 for full cluster-item structure). The labeling of the resulting clusters was done by the research team reflecting on the items and initial labeling from the participants' card sorts. The clusters and their corresponding items were then used as a tentative factor structure for both aspects of our scale in Phase 3.

Phase 3: Determining the Factor Structure and Initial Scale Validation

In Phase 3, our goals were to enhance parsimony of the scale (i.e., to reduce its number of items and dimensions), and to establish discriminant and convergent validity for both aspects of its dual-response format. Having developed a tentative factor structure, we were now able to change our emphasis from observing shared mental representations of subjective career meanings, to examining respondents' views about the importance and achievement of each career success item. We developed a questionnaire, piloted it and performed surveys in 16 countries, representing all major GLOBE (House et al., 2004) cultural clusters[iv]. As we already developed a tentative factor structure, we then used the data to run a series of confirmatory factor analyses (CFA) to optimize the dimensionality of our scale.

Data were gathered strategically with the intention to obtain heterogeneous within-country samples (cf. Cook & Campbell, 1979) regarding relevant respondents' demographic characteristics (i.e., cumulative work experience, occupation, gender). A minimum of 2 years of working experience was required for respondents to participate. The data collection process resulted in 4,438 valid responses from 16 country samples (Austria, Belgium, Brazil, China, France, Greece, India, Italy, Malaysia, Nigeria, Norway, Philippines, Slovenia, South Korea, Turkey, and the USA), which were relatively balanced across countries (ranging from 242 respondents for Norway to 373 for Belgium). Overall, 50.4 % of participants were female and 79.2% were employed full time. They were on average 39.2 years old and had 15.2 years of work experience. 23.9% of participants were managers, 41% professionals, 8 % service workers, 4.6% technicians, and 6.6 % clerical/support workers. Most of the participants (47.4 %) worked in organizations with fewer than 250 employees; the second-largest group were organizations with more than 1,000 employees (22%). Most respondents (57.7%) worked in the private sector, while 31.8 % were from the public sector. Finally, 11.6 % of participants lived in the rural areas, 44.3% in small towns or suburbs, and 43.7% in big cities.

Iterative confirmatory factor analyses

Based on the tentative factor structure of 52 items nested in 14 factors, we conducted iterative CFAs for both aspects of the scale (importance and achievement) separately. In the course of this process items with low standardized loadings were excluded, factors with low number of items and low factor loadings were excluded, and several highly correlated factors were merged (taking into account the higher-level clustering of items found in Phase 2). The labeling continued to build on the initial card sorting procedure from Phase 1, and the international research team's interpretations. The final factor labels were determined after a group discussion of the consortium. The resulting proposed factor structure had 7 factors. Consistent with the dual-response format logic the dimensionality of the scale was kept equal for both the importance and the achievement aspect. The final factor structure featured the following factors: 1) Learning & Development (4 items), 2) Work-Life Balance (3 items), 3) Positive Impact (3 items), 4) Positive Work Relationships (4 items), 5) Financial Security (3 items), 6) Entrepreneurship (2 items), and 7) Financial Success (3 items).

Table 1 shows the suggested factor structure for both importance and achievement with standardized factor loadings and composite reliability (CR). The correlations between the factors are available in Table 2 (parts 1 and 2). The proposed factor structure fit the data well in both cases. We used a procedure with robust standard errors (*Complex* procedure in Mplus) to account for clustering in our data when estimating the models (Muthén & Satorra, 1995). Further, as our data was skewed, and some data was missing we used a full information maximum likelihood (FIML) approach and the MLR estimator in MPlus 7.3. For the Importance aspect the 7-factor model solution fit the data (see Hu & Bentler, 1999) significantly better (RMSEA=0.031; CFI=0.972; TLI=0.965; SRMR=0.033) than a single-factor solution (RMSEA=0.099; CFI=0.681; TLI=0.648; SRMR=0.104). Similarly, for the Achievement aspect the 7-factor model solution fit the data significantly better (RMSEA=0.028; CFI=0.976; TLI=0.971; SRMR=0.027) than the single-factor solution (RMSEA=0.105; CFI=0.644; TLI=0.607; SRMR=0.098)[v].

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INSERT TABLE 1 ABOUT HERE

INSERT TABLE 2 ABOUT HERE

Convergent and Discriminant Validity

In a first step, we examined discriminant validity between the different factors of the scale. We did not identify serious threats to validity (Fornell & Larcker, 1981). We calculated Average Variance Extracted (AVE), square root of AVE, Maximum Shared Variance (MSV), and Average Shared Variance (ASV) and compared them in a matrix of correlations among factors. A minor convergent validity concern was noted for Learning & Development and Positive Work Relationships for the importance aspect, where AVEs were between 0.45 and 0.50.[vi] For the achievement aspect, we identified a minor discriminant validity concern between Positive Impact and Learning & Development, where the square root of the AVE of Positive Impact was less than the correlation between Positive Impact and Learning & Development. (see Supplement for full details, Tables 10 and 11). We addressed this issue by estimating an additional model with an alternative factor structure. Specifically, we tested the difference in fit between a 6-factor model (with Positive Impact and Learning & Development merged into one) and the 7-factor model. We established that even though the 6-factor model was also appropriate (RMSEA=0.038; CFI=0.950; TLI=0.947; SRMR=0.036), the 7-factor model still fit the data better (See Supplement, Table 7, Models 3 & 4 for details). Based on these results we can claim that the factors in our multidimensional scale were statistically distinct for both aspects.

We then proceeded to test the factors for discriminant and convergent validity against relevant existing scales (see full details in the Supplement, Tables 12-14). Since both aspects of our scale (i.e., importance and achievement) relate to a different nomological network, we considered different concepts and their corresponding measures. For the importance aspect, we examined correlational patterns with Schein's (1978) career anchors (as measured by Igbaria & Baroudi, 1993) and Schwartz's

work values (1994). Before performing the analyses, we hypothesized which dimensions of these well-established scales should correlate with our subjective career success factors (i.e., convergent validity) and which should not (i.e., discriminant validity). The correlations between the career anchor and work values factors, and our factors demonstrated patterns that were in line with our expectations: higher correlations to similar work values and career anchors and lower correlations to dissimilar ones (see Supplement, Table 12 for details). For example, our Entrepreneurship dimension significantly correlated with Schein's *Entrepreneurship* anchor (r=0.775; $p < 0.001$). Similarly, Positive impact dimension significantly correlated with Schein's *Service* anchor (r=0.608; $p < 0.001$) and Financial Success with Schwartz's *Achievement* value (r=0.467; $p < 0.001$). Alternatively, we also showed that in most cases factors that were not considered as conceptually related to our dimensions correlated considerably less strongly with them. For instance, the correlation of Schein's *Security-Geographic* career anchor with any of our factors was lower than 0.13 in absolute value.

We also found expected correlational patterns for the achievement aspect (see Supplement, Tables 13 & 14 for details). Specifically, the correlations between our dimension of subjective career success and Greenhaus et al.'s (1990) career satisfaction scale averaged at 0.361, ranging from 0.187 for Entrepreneurship to 0.469 for Learning & Development (all $p < 0.001$). Similarly, the correlations between Turban & Dougherty's (1994) scale of Perceived Career Success and dimension of subjective career success averaged at 0.326, ranging from 0.114 for Work-Life Balance to 0.451 for Learning & Development (also all $p < 0.001$). Moreover, in line with our expectations overall the Greenhaus et al. and Turban & Dougherty scales did not correlate well with the importance aspect of our scale. Generally, these results provide solid evidence of convergent and discriminant validity.

Phase 4: Further Scale Validation, Cross-Cultural Measurement Invariance, and Criterion Validity

The purpose of Phase 4 of the scale validation process was to validate the factor structure established in the previous phase on a new sample, examine cross-cultural measurement invariance of

the scale, test for country differences, and perform criterion validation[vii]. Our sampling strategy, again, aimed for heterogeneity of respondents according to relevant demographic characteristics (Cook & Campbell, 1979). Each country sample included at least 400 participants with at least 100 individuals in blue-collar, clerical, professional and managerial occupational categories respectively. The Phase 4 sample featured respondents from 20 countries (Argentina, Austria, Belgium, Finland, Germany, Greece, India, Italy, Japan, South Korea, Mexico, Nigeria, Norway, Pakistan, Portugal, Russia, Serbia, Slovenia, Switzerland, and the USA) representing all GLOBE cultural clusters except the Middle East. The data collection process resulted in 13,859 responses (see Supplement, Table 15 for details).

Overall, 50.2 % of participants were female and 86.0% were employed full time in this sample. They were on average 40.6 years old and had 16.2 years of work experience. As far as occupational groups were concerned, 24.9% of participants were managers, 35.7% professionals, 20.7 % clerical and service workers, and 15.4% were skilled laborers. The majority of respondents (52.5 %) worked in organizations with fewer than 250 employees and 30.6% in organizations with more than 1,000 employees. Similarly, most of them (63.2 %) worked in the private sector, while 26.4 % were from the public sector. Finally, 23.3% of our respondents had experience of international assignments or frequent business traveling abroad.

Further scale validation

We performed another CFA of the proposed factor model, which acknowledged the dual response format of the scale.[viii] Again, we used the FIML approach and MLR estimator in MPlus 7.3 to estimate the model (Muthén & Muthén, 2015). The fit indicators remained at acceptable levels (RMSEA 0.037; SRMR 0.036; CFI 0.916; TLI 0.901; see Hu & Bentler, 1999) and were much better than the single factor alternative for the dual response format (RMSEA 0.078; SRMR 0.083; CFI 0.590; TLI 0.562). In Table 1 we report standardized loadings and composite reliabilities (CR) for all dimensions and both aspects. These results reiterate our findings from Phase 3 about the validity of our scale.

Measurement invariance and cross-country differences

Next, we examined the measurement invariance of the proposed scale across countries. A cross-culturally robust scale should simultaneously allow for comparability between countries (i.e., similarity of the meanings of the construct itself) and measurement invariance. Large-scale cross-country projects such as Programme for International Student Assessment (PISA), the European Social Survey (ESS), and country-comparative projects in careers research (e.g., the Career Adapt-Abilities Scale project, see Savickas & Porfeli, 2012) are known for experiencing issues in establishing metric and scalar invariance using multi-group CFAs. To avoid these issues, we adopted the Alignment procedure in MPlus to examine approximate metric and scalar invariance across the participating countries, because this procedure has been shown to perform better (Asparouhov & Muthén, 2014).

Ensuring measurement invariance is key in allowing for comparisons (of means and variances) between countries in comparative research, and thus a differentiating characteristic of our scale. We found relatively high levels of invariance across the participating countries with only negligible indications of non-invariance for some item-country combinations (see Table 3). The overall invariance for items for all 7 dimensions and both aspects ranged between 4.2% and 18.2%, which is well below the 25% threshold set by Muthén & Asparouhov (2014, p.3). This implies that the scale is capable of validly comparing and establishing differences in subjective career success across countries.

INSERT TABLE 3 ABOUT HERE

Tables 4 and 5 demonstrate what such significant differences between countries look like, for one specific SCS dimension: Financial Security. In the tables, we can see that higher-ranked countries attach more importance to (e.g., Slovenia, USA, Nigeria, Belgium), or are more satisfied with their level of achievement (e.g., Finland, Austria, Switzerland) in terms of Financial Security. Furthermore, we see that countries can be grouped into classes between which statistically significant differences can be

observed. The right-hand column of Tables 4 and 5 lists all countries that had a significantly lower score than an observed country (second column).

Discussing descriptive results for, and significant differences between all countries in our sample for all 7 dimensions, for both aspects, would be impossible to do within the bounds of this article. However, we can state here that we found significant differences between countries for all dimensions, both for the importance and achievement aspect. Findings across the 7 dimensions followed a similar pattern as illustrated by the example above (for Financial Security). Countries clustered in groups of varying sizes between which statistically significant differences in importance and achievement were found. Readers interested in detailed country-level descriptive data and differences between the participating countries are directed to the website of the [name masked for review] Project, which contains an interactive map with data for all countries represented in Phase 4: [URL masked for review].[ix]

INSERT TABLE 4 AND 5 ABOUT HERE

Criterion validity

We used life satisfaction as a principal criterion for our criterion validity analysis. Life satisfaction is commonly operationalized, both in review articles (Spurk et al., 2019) and empirical studies (Abele, Hagmaier, & Spurk, 2016) as a higher-order outcome of career success. That is, career success is not necessarily the 'ultimate' outcome variable in careers research, but also has important further outcomes of its own (Hall & Chandler, 2005). Especially considering the subjectivist, multidimensional, dual-format approach we adopted in developing our scale—which was itself inspired by the life satisfaction literature (Wu & Yao, 2006)—we can assume that subjective career success and life satisfaction should be closely related (Abele et al., 2016). That is, if we know what is important to a person across multiple dimensions of his or her career, as well as how happy that person is with the level he or she has achieved on each

dimension, this should significantly affect their life satisfaction. As previous research has shown, people's careers are more often than not an important part of their identity, so satisfaction versus dissatisfaction in this domain is likely to affect overall life satisfaction (Erdogan et al., 2012).

We measured life satisfaction with the 5-item satisfaction with life scale (Diener, Emmons, Larsen, & Griffin, 1985). A sample item was "In most ways my life is close to my ideal". Participants used a 7-point Likert scale to rate this item. An examination of the measure's quality in our dataset showed that the measure was reliable (CR = 0.891) and adequate for further analyses (CFA fit indicators: RMSEA = 0.052; CFI = 0.995; TLI = 0.099; SRMR = 0.021; AVE = 0.623).

Results from simple single-predictor structural equation models relating to our focal criterion are reported in Table 6. As the table shows, achievement scores for all dimensions were significant positive predictors of life satisfaction (standardized regression coefficients ranged from .258 to .525). On average, they explained about 18% of variance in life satisfaction, offering support for the criterion validity of our scale.

INSERT TABLE 6 ABOUT HERE

In addition to our focal criterion variable life satisfaction, we extended our criterion analysis to include other relevant work-related outcomes such as employability (Janssens, Sels, & Van den Brande, 2003), work engagement (Schaufeli & Baker, 2004), organizational commitment (Meyer & Allen, 1984) and turnover intentions (Cammann, Fichman, Jenkins, & Klesh, 1979). Our analyses show that our scale factors significantly predicted these criteria, as well (see Table 7 below, and Table 16 in the Supplement). Our factors demonstrated strong relationships to, in particular, work engagement (standardized regression coefficients ranged from .235 to .617, the average explained variance was 20%) and organizational commitment (average standardized regression coefficients .35, average explained

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variance 13%). The relationships of our factors to employability and turnover had the expected sign, but showed smaller effect sizes, explaining less than 10% of variance on average.

INSERT TABLE 7 ABOUT HERE

Interaction patterns between Importance and Achievement

Finally, we used latent path and latent interactions modeling in Mplus 7.4 (see Sardeshmukh & Vandenberg, 2017) to examine the joint effects of the importance and achievement aspects of subjective career success in predicting life satisfaction. Since our scale integrates two aspects of subjective career success, we first report correlations for all dimensions and both aspects (see Table 2: part III). The correlations within the same dimension on different aspects (e.g., between importance and achievement of Learning and Development) are reported on the diagonal. All correlations were positive but varied substantially among pairs of different dimensions: from very weak for Financial Success (0.078) to very strong for Positive Impact (0.712), implying that the relationship between importance and achievement was dimension-specific. We see from Table 8 that inclusion of latent interaction terms improved the majority of the latent interaction models (see Akaike information criterion change in the table)—they fit the data better compared to models where only main effects of achievement were included. Overall, this implies that including the importance aspect provided additional explanatory power to the models. In addition, the results in Table 8 show that the joint effects of importance and achievement were also dimension-specific.

INSERT TABLE 8 ABOUT HERE

Four distinct patterns of interaction between importance and achievement were observed for different dimensions of the scale (see Figure 1). In a first pattern, attaching more importance to a dimension decreased the magnitude of the relationship between achievement on that dimension and

life satisfaction, especially at higher levels of achievement (i.e., a 'fan out' pattern). This pattern was found for Learning & Development, Positive Work Relationships, and Positive Impact. The second pattern was similar to the first—high importance makes it more difficult for achievement to translate into higher life satisfaction—but was the same across lower and higher levels of achievement (i.e., a 'parallel' pattern). This pattern was found for Financial Security and Financial Success. The third pattern (also parallel) was inverse to the second, with high importance leading to a stronger relationship between achievement and life satisfaction. This pattern was found for Work-Life Balance only. In a fourth pattern, lower importance of a dimension buffers the effects of lower achievement on life satisfaction. This pattern was found for Entrepreneurship. The identification of these different patterns showcases the capability of the Dual Aspect Importance & Achievement Career Success Scale to detect nuanced differences and facilitate a better theoretical and empirical understanding of subjective career success as a construct.

INSERT FIGURE 1 ABOUT HERE

Checking for common method variance

As Phase 4 was a cross-sectional study, we performed the necessary steps to prevent and analyze the risk of common method variance (CMV). In particular, we created and included an original marker variable about an unrelated construct—use of computers at home (sample item: "If more people had computers at home it would be beneficial." We also analytically checked for potential CMV by adopting the common latent factor and marker variable approaches. The amount of CMV established in our data was between 2.3% and 5% for the importance aspect and between 20.8% and 22% for the achievement aspect, which is well below the 50% threshold (Hair, Black, Babin, Anderson, & Tatham, 1998). We conclude that although we cannot completely exclude that CMV was present in our data, it did not represent a serious threat to validity of our findings.

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Discussion

The present study set out to develop and test a subjectivist, multidimensional measure of career success appropriate for use in cross-cultural and/or country-comparative research. The major gap identified in the literature was the dominance of career success studies and measures administered in single countries (Mayrhofer et al., 2020), of which it is not (yet) clear whether their underlying assumptions hold across cultural contexts (Henrich et al., 2010). Over a period of several years and spanning four research phases, we developed a new scale—the 'Dual Aspect Importance & Achievement Career Success Scale' (see Appendix 1)—to measure subjective career success, comprised of seven dimensions (i.e., Learning & Development, Work-Life Balance, Positive Impact, Entrepreneurship, Positive Work Relationships, Financial Security, and Financial Success), that are rated on two aspects (i.e., importance and achievement).

The scale development process aimed to tackle several limitations and concerns raised by prominent voices in the careers literature (Gunz & Heslin, 2005; Spurk et al., 2019), that were in part also addressed by other research teams that have developed subjective career success measurement scales in recent years, of which the development process ran concurrently to that of the scale reported here (Zhou et al., 2013; Pan & Zhou, 2015; Shockley et al., 2016). Specifically, we set out to develop a scale that was, first of all, multidimensional (meaning that several 'meanings' of career success are captured, as opposed to unidimensional scales where items are averaged out into a single score; cf. Greenhaus et al., 1990; Turban & Dougherty, 1994). Second, we wanted our scale to be 'subjectivist', in two different ways—by developing items based on qualitative input from workers from all over the world (see Phase 1); and by developing a dual response format that allowed us to weigh satisfaction of a dimension by the idiosyncratic importance attached to it by each individual respondent. This was based on insights from the life satisfaction/quality of life literature, in which debates about what is the best way to

measure satisfaction have been ongoing for decades (Wu & Yao, 2006), and characterized by painstaking detail to conceptual, theoretical, and psychometric issues (Wu, Chen, & Tsai, 2009).

As mentioned above, the recent scales developed by Zhou et al., 2013, Pan & Zhou, 2015, and Shockley et al. (2016) have also explicitly addressed these first two concerns. Both scales are multidimensional, and items were generated based on a preliminary interview study. In addition, both scales mention the issue of weighing factor satisfaction by importance. Shockley et al. (2016) did not measure importance directly but conducted a relative weights analysis to examine the percentage of variance that each dimension accounted for in the total R^2 of their study outcomes. In their Discussion section, they explicitly state that an avenue for further research is to ask respondents to rate both their satisfaction and importance with each item and weigh both aspects accordingly. As far as we are aware, however, to date there has been no research that has picked up this suggestion. Pan and Zhou, in their 2015 paper, build on their 2013 scale development paper to add the dimension of what they called 'criteria' of success. The authors likened this facet to personal goals and values and multiplied these scores with ratings of success on each dimension. They did not, however, analyze both facets separately or discuss applications and implications of using dual-format response scales.

In Table 9, we present a direct comparison between the factors of the Dual Aspect Importance & Achievement Career Success Scale, and those of Pan & Zhou (2015) and Shockley et al. (2016). Although we cannot directly compare the cross-cultural validity of the three scales—seeing as Pan & Zhou's (2015) scale was only administered in China, and Shockley et al.'s (2016) scale only in the US—the table does suggest two things. First, that the longer version of the DAIA-CSS as developed in Phase 2 (interested readers are referred to Table 4 in the Supplementary Materials) includes all factors from both other scales, as well as a

few factors that one (i.e., Positive Impact for Pan & Zhou, 2015; and Financial Security and Financial Success for Shockley et al., 2016) or both (i.e., Entrepreneurship) of the other scales do not have. Second, that not all of these factors can be assumed to be cross-culturally robust, and thus recommended for universal usage. As our Phase 3 and Phase 4 analyses showed, only 7 of the factors in our scale—and thus potentially also of Pan & Zhou's (2015) and Shockley et al.'s (2016) scales—were found to be cross-culturally valid. Since our goal was to develop a universal measure of subjective career success, only these factors were retained in our final scale. Only further research could definitively demonstrate whether this is also the case for Pan & Zhou's (2015) and Shockley et al.'s (2016) scales—i.e., whether some of their factors are more suitable for cross-cultural research than others.

INSERT TABLE 3 ABOUT HERE

The reader may notice that some of our subscales include work design features (e.g., challenging work, relationships at work) that might not be traditionally associated with career success. We believe that this is due to the nature of our questions which transcend the relationship between "careers" and "work" and are longitudinal and retrospective in nature. This corresponds to Savickas' (2012) notion of "life design" which positions career development within the larger realm of life development.

We argue that it is not the multidimensional or subjectivist nature of the DAIA-CSS *per se* in which its unique contribution lies, but rather, the scale development process behind the scale, and the new avenues it opens up for further research. That is, to the best of our knowledge there have been very few international research projects that have adopted a decentered approach such as the one described here. Although many scholars have lamented the problem of the WEIRD perspective in management and organizational research (Henrich et al., 2010), solutions

have been less clearly spelled out. It is our aspiration for the research process outlined in this article—in particular in the detailed Supplementary Materials—to be a roadmap for other cross-cultural research efforts, both within and outside of the careers field. Specifically, we advise against research that is informed primarily by concepts, ideas, and assumptions from one or a few predominant regions and/or high-status scholars. Rather, cross-cultural research should reflect the assumptions and mental models (Kaše et al., 2020) of each of its participating countries and members in equal measure, through a participatory 'In vivo' approach (Brett et al., 1997; Leung, 2008).

In addition, our approach opens up a range of novel research questions—and our scale a valid methodological approach—for country-comparative careers research (Mayrhofer et al., 2020). In the theoretical framework of the present paper we have discussed several theoretical frameworks that have so far remained unexamined within the careers field: social representation theory (Moscovici, 1963), multiple discrepancies theory (Michalos, 1985), and three competing theories for testing country-level differences in satisfaction—i.e., comparison theory, folklore theory, and livability theory (Veenhoven, 1996). Discussing and testing each of these theories separately based on the data we collected across the four research phases falls beyond the scope of the present paper. Rather, we propose, these theories and their underlying assumptions represent fertile ground for future country-comparative research on career success, using the Dual Aspect Importance & Achievement Career Success Scale.

Social representation theory, for instance, proposes that individually held meanings of career success are embedded within a given socio-cultural context (Moscovici, 1963). That is, members from different societies or communities hold different 'schemas' of career success (Kaše et al., 2020), that become reified through organizational and governmental career

management practices (Dries, 2011; Moscovici & Hewstone, 1983), and are thus often taken for granted by the members of that society—until cross-cultural research uncovers its idiosyncrasies (Hanges & Dixon, 2004). Without going into too much detail, it is clear from our findings that social representations of career success did indeed vary between the 20 countries in our sample, as demonstrated by significant country differences in the importance attached to the different dimension (see Tables 24 through 30 in the Supplementary materials). To be clear, we are not claiming that the importance scores in our data are *representative* for each country. Rather, we propose that our scale—because of its cross-cultural validity— is the most appropriate measure for studying social representations of career success in future country-comparative studies.

The dual-response format, as well, allows researchers to address new research questions, such as the exact nature of the relationship between a person's relative standards and their feelings of satisfaction or dissatisfaction (Solberg et al., 2002). It has been suggested, for instance, that individuals might have a 'set point' of satisfaction throughout their career, that is more informed by their dispositional affect than by their objective circumstances, even across career transitions (Judge & Larsen, 2001). If this is true, it has promising implications for the effects that career counseling and management interventions can be expected to have on (different types of) individuals. The Dual Aspect Importance & Achievement Career Success Scale allows, for the first time, to test this type of hypothesis, ideally by coupling data on dimension importance and achievement to measures of objective career success, longitudinally across career stages. Multiple discrepancies theory—which holds that (life) satisfaction is a function of personal standards just as much as objective living conditions—offers a particularly promising theoretical framework for this type of research (Michalos, 1985; Solberg et al., 2002).

The dual-response format also offers tremendous potential for a simultaneous assessment of the relationship between objective and subjective career success across countries and cultures. If livability theory is more true for a country or set of countries, we should find that subjective career success is mostly influenced by objective indicators of success, while dimension importance should play only a minor role (Veenhoven, 1996). Finding support for folklore theory, in contrast, would require finding higher mean achievement scores (and lower variance) for a country or set of countries, that are not predicted to a large extent by importance nor objective career success. A highly publicized example of this type of research is the World Happiness Report, which ranks countries on aggregate subjective happiness on an annual basis (Helliwell et al., 2019). Finally, if a meaningful interaction effect between importance and achievement is found in a country or set of countries—that is more predictive of a set outcome than either dimension, or objective career success separately—this would indicate support for comparison theory. This theory holds that it is not only the objective circumstances in a country (e.g., its GDP or Gini coefficient), nor its national character that determines country-level satisfaction; but rather, that different countries have different standards.

In what follows, we list the limitations of the present study, along with suggestions for how future studies may remedy them. We conclude with implications for career counseling and organizational career management practice.

Limitations and Avenues for Future Research

As is the case for every research project, the present study was not without its limitations. First, although our sampling strategy was systematic and highly structured across countries, we cannot claim that the resultant country samples are representative. They were, however, heterogeneous and balanced in terms of respondent gender, age, and occupational type (cf. Cook

& Campbell, 1979). We are thus confident that the level of variability in our data was sufficient to allow for appropriate cross-cultural validation. Furthermore, while we achieved highly balanced country samples (i.e., a similar number of observations) in Study 3, in Study 4 country-level observations were less balanced. Although this means that some countries were over-represented in the data (and others under-represented), in our measurement invariance analyses countries were treated as separate latent classes, such that the number of cases from a country did not affect the results.

Second, as discussed at the end of the Results section for Phase 4, the study was cross-sectional, meaning that common method variance (CMV) needed to be checked for. As we described, we did this through the inclusion of a marker variable that was conceptually unrelated to the study variables (Podsakoff, MacKenzie, Lee, & Podsakoff, 2012). We recommend that readers interested in using the Dual Aspect Importance & Achievement Career Success Scale include the same marker variable (i.e., use of computers at home), such that they can directly assess the risk of CMV in their data compared to the coefficients reported in the present paper.

Third, one of the features of our subjective career success scale is the Entrepreneurship factor, which has typically been overlooked in career research due to its focus on organization-based careers in career research. While our Entrepreneurship factor focuses primarily on owning a company or running a business, there is potential for further enriching the discussion about entrepreneurial aspects of career success by including, for example, the notion of entrepreneurial behavior throughout one's career. We call for more research in this area and welcome the opportunity for better integration of career and entrepreneurship literatures (Burton, Sørensen, & Dobrev, 2016).

Fourth, as the most recently developed measures of subjective career success (i.e., Pan & Zhou, 2015; Shockley et al., 2016; Zhou et al., 2013) were published after the initial development and data collection for the Dual Aspect Importance & Achievement Career Success Scale' (DAIA-CSS), we were not able to include an analysis of the incremental validity of our scale compared to these measures. We reiterate that the unique contribution of our scale lies with its cross-cultural applicability, and in the description of the N-way approach of the research project spelled out in this paper. Examining the overlap, complementarity, and unique explanatory and predictive power of the different multidimensional measures of subjective career success—as well as their relationships to known antecedents and outcomes—in direct comparison to each other is a clear avenue for further research.

Finally, the usage and reporting of the dual response format in the present paper is limited—many more applications of this format are conceivable in further research, as outlined below. As we suggested earlier, the two aspects can both be studied separately—and can be expected to have different sets of antecedents and outcomes—as well as jointly. Studying the satisfaction aspect separately has been the default in the literature (cf. Greenhaus et al., 1990; Shockley et al., 2016), so we will not go into future research avenues on this end, as contributions here will likely be only incremental. That said, our scale does allow for a more nuanced study of the differential predictors and outcomes of each 'achievement' dimension separately (Spurk et al., 2019).

Although we strongly recommend that researchers using the Dual Aspect Importance & Achievement Career Success Scale always administer both response formats alongside one another—it hardly increases the cognitive load for respondents and, minimally, the importance aspect 'anchors' responses for achievement (Wu et al., 2009)—we can come up with a number

of research questions that are related to the importance aspect only. A first research avenue is studying differences between groups, cross-sectionally, such as differences between occupations, differences between people of different socio-demographic backgrounds, and differences between people embedded in different societies or communities (as discussed earlier in the section on social representation theory; Moscovici, 1963). A second avenue is studying differences over time. For instance, the importance attached to different meanings of career success might shift across career and life stages (potentially in a gendered way; see Mainiero & Gibson 2018). It may also shift after certain career transitions (studies could measure importance of different dimensions pre- and post-transition), geographical transitions (e.g. expatriation, migration), or career shocks such as getting fired, family tragedies, or going through a global health crisis such as COVID-19. It has been documented that all of these types of events influence people's life and work priorities (Akkermans, Seibert, & Mol, 2018), which would likely manifest in changes in importance scores for a given dimension. Another research question is whether the importance attached to certain career meanings might converge between countries when they are affected by a unifying experience, such as COVID-19, which has led to universally shared experiences such as job insecurity, anxiety and depression, but also a realization of wanting to spend more time at home or engaged in leisurely or relaxing activities (Kniffin et al., 2020). The forced shift of many organizations to a work-from-home culture supported by digital means may also have affected mental representations of career success. For instance, research has shown that telecommuting increases satisfaction of the need for autonomy but reduces satisfaction of relatedness with colleagues (Van Yperen, Rietzschel, & De Jonge, 2014).

We can also identify several avenues for future research integrating the achievement and importance aspects simultaneously. As reported in our findings, four different types of interaction patterns emerged from our data (see Figure 1). The main question for further research, thus, is to examine exactly how achievement and importance relate to each other, and what are potential boundary conditions that determine in which pattern they fall. In the life satisfaction literature, different approaches have been described to modeling the relationship between importance and achievement across different life domains. Interaction effects (Wu & Yao, 2006), formative models using latent variables (Wu et al., 2009), and algorithmic formulas (Cummins, 1997) have all been tried and tested. Overall, these studies have concluded that dual-format scales offer potential for a more in-depth theoretical explanation of the exact predictors of life satisfaction, rather than a statistical improvement *per se* (Wu et al., 2009). This makes sense as achievement scores weighed by importance will always be highly correlated with the achievements scores alone (Wu & Yao, 2006). Hence, it is not the unique variance added by the importance aspect that builds the case for why to include it, but rather, the types of research questions it allows us to address. Concrete ideas for further research include but are not limited to the following. First, it is possible that a given dimension of career success only relates to global satisfaction and/or drives future behavior when a threshold value of importance is met or surpassed; and different (types of) people may have different thresholds. Second, studies on innate psychological needs (Sheldon & Niemiec, 2006) have found that fulfilment of particular needs requires balance. Future research thus could look at what happens when achievement for one or several (deemed important) career success dimensions is low—under which conditions achievement of other dimensions could compensate for this in buffering effects on global satisfaction or behavior (Dysvik, Kuvaas, & Gagné, 2013). Third, some people might define

career success based upon current achievement of a particular success meaning, whereas others may emphasize the ongoing quest to achieve such important standards. In addition, we expect these dynamics to vary by career success dimension. It may be that the nature of some meanings of career success (e.g., learning and development) are less subject to being measured by a 'destination' whereas others (e.g., financial security) are very much outcome driven. Satisfaction with a career success meaning is thus dependent upon the meaning's importance for the individual (Wu & Yao, 2006) as well as the achievement of the goal. Finally, in terms of country-comparative research, future research could further dig into country differences in 'standards' for career success, as spelled out in the life satisfaction literature (Solberg et al., 2002). After a certain threshold of objective welfare in a country is achieved, for instance (cf. livability theory; Veenhoven, 1996), perhaps it is no longer the objective life or career circumstances that matter. Comparing two or more countries with similar standards of living (and perhaps also similar career systems) that still have very different mental models of career success (Kaše et al., 2020), would be a highly promising avenue for studying the drivers of subjective career success across countries.

Implications for Practice

We believe that this research offers a new rigorous tool for practitioners in and out of organizations to potentially enhance the motivation and satisfaction, development, performance, commitment, and retention of employees both within and across national boundaries. Being able to simultaneously understand the individual but also to meaningfully compare them across cultural, institutional, and organizational contexts allows organizations to be responsive to the universalist/contextualist (Mayrhofer, Brewster, Morley & Ledolter, 2011) dilemma, and to try to be more flexible in choosing between standardization and individualization of organizational and human resource strategies and applications. Many organizations report a need for more customized

internal career paths, but struggle coming up with more than two trajectories—i.e., a leadership track and a technical/expert track (Dries, 2011). Using the Dual Aspect Importance & Achievement Career Success Scale to survey one's entire workforce might offer inspiration to develop a more diverse set of career paths inside and outside of the organization. It may also help organizations achieve clarity on the value proposition they want to put forward in their recruitment messages, as to what the organization stands for in terms of career management (Hall, 2002).

Consultants and career counselors might use the scale to better understand what individuals emphasize in the workplace. Career interventions that work well for one person may have a null or opposite effect on another person, depending on the importance they attach to different meanings of career success. After completing a career success questionnaire based upon our scale, individuals could be provided with a better understanding as to which are important factors for them in their careers. The scale could also serve a diagnostic purpose, in that individuals are stimulated to think about discrepancies between importance of career success dimensions and perceived levels of achievement. This naturally generates discussion as to the reasons for why the discrepancies may be occurring, and then efforts can be made to develop strategies to address them. Similarly, organizations can use the scale to understand groups of employees and use commonalities or differences on our measures to inform HRM practices. Beyond changing the organization, traditional tools like career development and newer tools such as job crafting (Tims, Bakker, & Derks, 2012; Wrzesniewski & Dutton, 2001) exist that can allow and even encourage the individual employee to better their person-organization fit on their own, equipped with better insight.

As for the cross-cultural component of the present study, beyond differences in unique regional settings career success constructs need to consider the fact that nowadays many individuals cross cultures by having global work experiences (Shaffer, Kraimer, Chen, & Bolino, 2012); or by being

employed in multinational organizations that tend to apply national career structure norms largely unchanged abroad (Hartmann, Feisel, & Schober, 2010). As people increasingly cross international boundaries, and companies manage human resources globally, it becomes necessary not to just understand that definitions of career success can vary from person to person, but also how these meanings vary, and how they can be compared across countries. This will help for example in determining if an individual contributor at a manufacturing plant in India has the same strivings as one in Belgium, and what are the implications. This flexibility allows talent management architecture and systems to look not only across cultures but also across career stages as they observe, develop and learn from agile high-potentials who may represent the unfolding future of the company's own strategic and operational agility. Given the emphasis on personal meaning inherent in the subjective career concept, career success meanings are likely particularly sensitive to cultural and institutional influences. At the same time we argue that multinational organizations' decisions for adopting a differentiated or a standardized approach to career management (Anonymous 1) needs to be based on valid-country comparative frameworks and data (Mayrhofer, Brewster, & Farndale, 2018).

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Table 1. Factor analyses (Phases 3 and 4)

	Phase 3		Phase 4	
Factor / item	**Importance**	**Achievement**	**Importance**	**Achievement**
Learning & Development	CR = 0.778	CR = 0.806	CR =0.791	CR =0.794
LD1 (Item 19)	0.637	0.695	0.622	0.670
LD2 (Item 20)	0.621	0.675	0.597	0.676
LD3 (Item 15)	0.720	0.710	0.750	0.740
LD4 (Item 18)	0.753	0.772	0.758	0.770
Work-Life Balance	CR = 0.790	CR = 0.868	CR =0.739	CR =0.744
WLB1 (Item 44)	0.700	0.795	0.727	0.814
WLB2 (Item 45)	0.721	0.817	0.542	0.717
WLB3 (Item 46)	0.814	0.873	0.626	0.747
Positive Impact	CR = 0.750	CR = 0.725	CR =0.700	CR = 0.699
PI1 (Item 47)	0.797	0.755	0.678	0.634
PI2 (Item 48)	0.738	0.687	0.673	0.677
PI3 (Item 27)	0.576	0.606	0.641	0.662
Entrepreneurship	CR = 0.850	CR = 0.858	CR =0.850	CR =0.857
ENT1 (Item 11)	0.833	0.861	0.656	0.696
ENT2 (Item 12)	0.896	0.873	0.887	0.843
ENT3 (Item 70)*	N/A	N/A	0.905	0.863
Positive Work Relationships	CR = 0.769	CR = 0.766	CR =0.738	CR =0.741
PWR1 (Item 37)	0.666	0.601	0.608	0.590
PWR2 (Item 38)	0.694	0.689	0.587	0.609
PWR3 (Item 41)	0.701	0.736	0.687	0.712
PWR4 (Item 42)	0.634	0.653	0.662	0.693
Financial Security	CR = 0.789	CR = 0.842	CR =0.688	CR =0.703
FSEC1 (Item 50)	0.730	0.723	0.511	0.584
FSEC2 (Item 51)	0.762	0.874	0.610	0.725

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FSEC3 (Item 52)	0.741	0.799	0.678	0.817
Financial Success	CR = 0.754	CR = 0.765	CR =0.724	CR =0.726
FSUC1 (Item 6)	0.694	0.737	0.603	0.739
FSUC2 (Item 8)	0.658	0.668	0.655	0.624
FSUC3 (Item 10)	0.778	0.757	0.756	0.721

Notes: standardized factor loadings; all loadings are significant at $p < 0.001$; CR = composite reliability; * new item in Study 4; item number in parentheses serves as a link to Study 2 (i.e., with Figure 1).

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Table 2. Correlations between the different dimensions of the scale

Table 2 (part I) – Importance aspect only

	[2]	[3]	[4]	[5]	[6]	[7]
[1] Learning & Development	0.215***	0.439***	0.683***	0.538***	0.386***	0.223***
[2] Entrepreneurship		0.043	0.191***	0.023	0.057^{+}	0.430***
[3] Work-Life Balance			0.490***	0.545***	0.592***	0.247***
[4] Positive Impact				0.566***	0.362***	0.133*
[5] Positive Work Relationships					0.549***	0.369***
[6] Financial Security						0.384***
[7] Financial Success						1

Note: Net of measurement error. Correlations are statistically significant at *** p < 0.001; * p < 0.05; + p < 0.1

Table 2 (part II) – Achievement aspect only

	[2]	[3]	[4]	[5]	[6]	[7]
[1] Learning & Development	0.341***	0.303***	0.694***	0.590***	0.447***	0.493***
[2] Entrepreneurship		0.197***	0.348***	0.153***	0.239***	0.497***
[3] Work-Life Balance			0.435***	0.451***	0.426***	0.334***
[4] Positive Impact				0.592***	0.475***	0.447***
[5] Positive Work Relationships					0.450***	0.415***
[6] Financial Security						0.647***
[7] Financial Success						1

Note: Net of measurement error. Correlations are statistically significant at *** p < 0.001.

Table 2 (part III) – Both aspects (Importance and Achievement)

Importance						
LD	ENT	WLB	PI	PWR	FSEC	FSUC

Achievement	LD	0.540	0.101	0.209	0.433	0.331	0.176	0.073
	ENT	0.047	0.124	0.022	0.035	0.010	0.005	-0.073
	WLB	0.132	0.032	0.270	0.169	0.196	0.136	0.058
	PI	0.448	0.120	0.249	0.712	0.405	0.224	0.107
	PWR	0.375	0.079	0.310	0.392	0.581	0.292	0.143
	FSEC	0.152	-0.021	0.131	0.138	0.152	0.216	-0.060
	FSUC	0.147	0.114	0.013	0.157	0.094	0.008	0.078

Note: Coefficients are net of measurement error. LD = Learning & Development; ENT = Entrepreneurship; WLB =Work-Life Balance; PI = Positive Impact; PWR = Positive Work Relationships; FSEC = Financial Security; FSUC = Financial Success.

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Table 3. Cross-country invariance of intercepts and loadings for dimensions of the proposed scale

	% of non-invariant intercepts	% of non-invariant loadings	Overall % of non-invariance
Achievement Aspect			
Learning & Development	11.25	0.00	5.62
Work-Life Balance	10.00	20.00	15.00
Positive Impact	13.30	6.67	10.00
Entrepreneurship	16.67	10.00	13.33
Positive Work Relationships	22.50	5.00	13.75
Financial Security	20.00	6.67	13.33
Financial Success	33.30	3.30	18.17
Importance Aspect			
Learning & Development	23.75	8.75	16.25
Work-Life Balance	13.33	3.33	8.33
Positive Impact	16.67	6.67	11.67
Entrepreneurship	10.00	21.67	15.83
Positive Work Relationships	11.25	11.25	11.25
Financial Security	8.33	0.00	4.17
Financial Success	31.67	0.00	15.83

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Table 4. Country differences in mean levels of importance attached to *Financial Security*

Ranking	Country	Factor Mean	Countries With Significantly Smaller Factor Mean
1	Slovenia	1.01	Belgium Portugal Greece Italy Serbia Finland Austria India Russia Norway Pakistan Germany Mexico Switzerland S.Korea Japan
2	USA	0.928	Belgium Portugal Greece Italy Serbia Finland Austria India Russia Norway Pakistan Germany Mexico Switzerland S.Korea Japan
3	Nigeria	0.681	Italy Serbia Finland Austria India Russia Norway Pakistan Germany Mexico Switzerland S.Korea Japan
4	Belgium	0.221	Italy Serbia Finland Austria India Russia Norway Pakistan Germany Mexico Switzerland S.Korea Japan
5	Portugal	0	Finland Austria India Russia Norway Pakistan Germany Mexico Switzerland S.Korea Japan
6	Greece	-0.128	Austria Russia Norway Pakistan Germany Mexico Switzerland S.Korea Japan
7	Italy	-0.216	Finland Austria Russia Norway Germany Mexico Switzerland S.Korea Japan
8	Serbia	-0.276	Austria Norway Germany Mexico Switzerland Japan
9	Finland	-0.646	Switzerland Japan
10	Austria	-0.667	Switzerland Japan
11	India	-0.686	Switzerland Japan
12	Russia	-0.694	Switzerland Japan
13	Norway	-0.773	Switzerland Japan
14	Pakistan	-0.787	Switzerland Japan
15	Germany	-0.894	Switzerland Japan
16	Mexico	-1.082	Japan
17	Switzerland	-1.594	Japan
18	S.Korea	-2.05	
19	Japan	-3.049	

20	Argentina	-3.069

Note: benchmark country in alignment analyses was Portugal.

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Table 5. Country differences in mean levels of achievement of *Financial Security*

Ranking	Country	Factor Mean	Countries With Significantly Smaller Factor Mean
1	Finland	0	Pakistan Mexico Germany Norway Italy Argentina India Belgium USA Nigeria Serbia Greece Portugal Russia S.Korea Japan
2	Austria	-0.028	Pakistan Mexico Germany Norway Italy Argentina India Belgium USA Nigeria Serbia Greece Portugal Russia S.Korea Japan
3	Switzerland	-0.03	Mexico Germany Norway Italy India Belgium USA Nigeria Serbia Greece Portugal Russia S.Korea Japan
4	Slovenia	-0.084	Germany Norway Italy India Belgium USA Nigeria Serbia Greece Portugal Russia S.Korea Japan
5	Pakistan	-0.183	Nigeria Serbia Greece Portugal Russia S.Korea Japan
6	Mexico	-0.208	Nigeria Serbia Greece Portugal Russia S.Korea Japan
7	Germany	-0.223	Nigeria Serbia Greece Portugal Russia S.Korea Japan

8	Norway	-0.229	Nigeria Serbia Greece Portugal Russia S.Korea Japan
9	Italy	-0.247	Nigeria Serbia Greece Portugal Russia S.Korea Japan
10	Argentina	-0.249	Serbia Greece Portugal Russia S.Korea Japan
11	India	-0.26	Serbia Greece Portugal Russia S.Korea Japan
12	Belgium	-0.265	Nigeria Serbia Greece Portugal Russia S.Korea Japan
13	USA	-0.321	Serbia Greece Portugal Russia S.Korea Japan
14	Nigeria	-0.41	Portugal Russia S.Korea Japan
15	Serbia	-0.504	Portugal Russia S.Korea Japan
16	Greece	-0.58	Portugal Russia S.Korea Japan
17	Portugal	-0.784	Japan
18	Russia	-0.877	Japan
19	S.Korea	-0.953	Japan
20	Japan	-1.22	

Note: benchmark country in alignment analyses was Finland.

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Table 6. Main effects of dimension achievement on life satisfaction (criterion variable)

	Coefficient	R^2
Learning & Development	0.484	0.234
Work-Life Balance	0.397	0.157
Positive Impact	0.416	0.173
Entrepreneurship	0.258	0.067
Positive Work Relationships	0.417	0.174
Financial Security	0.525	0.276
Financial Success	0.452	0.204

Notes: Standardized regression coefficients for structural equation models with life satisfaction as outcome are reported; p-values for all coefficients < 0.001. Details about model fit indicators and measurement part of the models are available from the authors. The analyses are based on pooled data from participating countries; n ranges from 12,517 to 12,528.

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Table 7: SCS Achievement dimensions predicting selected alternative criterion measures

	Employability		Work engagement		Org. Commitment		Turnover Intentions	
	Coeff.	R^2	Coeff.	R^2	Coeff.	R^2	Coeff.	R^2
LND	0.261	0.068	0.617	0.381	0.474	0.225	-0.304	0.092
WLB	0.075	*0.006*	0.314	0.098	0.240	0.057	-0.221	0.049
PIM	0.207	0.043	0.561	0.315	0.423	0.179	-0.257	0.066
ENT	0.080	*0.006*	0.235	0.055	0.228	0.052	-0.156	0.024
REL	0.236	0.056	0.492	0.242	0.419	0.176	-0.285	0.081
FSEC	0.152	0.023	0.362	0.131	0.313	0.098	-0.271	0.074
FACH	0.210	0.044	0.399	0.159	0.374	0.140	-0.266	0.071

Note. N = 12935-13055; Standardized coefficients; all significant at p < .001; R2 in italics are not significant.

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Table 8. Main and interaction effects of dimension importance and achievement on life satisfaction (criterion variable)

	Achievement	Importance	Interaction	R^2	ΔAIC
Learning & Development	0.528	-0.096	-0.039	0.236	-21.05
Work-Life Balance	0.378	0.068	-0.004 (n.s.)	0.162	1.86
Positive Impact	0.574	-0.236	-0.046	0.195	-23.78
Entrepreneurship	0.280	-0.090	-0.093	0.089	-98.24
Positive Work Relationships	0.486	-0.127	-0.047	0.18	-29.00
Financial Security	0.545	-0.037	-0.003 (n.s.)	0.28	1.95
Financial Success	0.467	-0.156	0.024 (n.s.)	0.223	-3.46

Notes: Standardized regression coefficients based on latent interaction models with life satisfaction as outcome are reported; all coefficients are statistically significant at $p < 0.001$ unless indicated otherwise. Details about model fit indicators and measurement part of the models are available from the authors. The analyses are based on pooled data from participating countries; n ranges from 12,517 to 12,528. Δ*AIC* relates to the difference in Akaike information criterion (ΔAIC) between main effects only structural equation model and structural equation model including latent interaction term in addition to main effects.

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Table 9. Factors of the DAIA-CSS* compared to Pan & Zhou (2015) and Shockley et al. (2016).

	Pan & Zhou (2015)			Shockley et al. (2016).							
DAIA-SCS	Intrinsic Fulfillment	External Compensation	Work-Life Balance	Recognition	Quality Work	Meaningful Work	Influence	Authenticity	Personal Life	Growth & Development	Satisfaction**
Cross-culturally robust factors:											
1. Learning & Development	×									×	
2. Work-Life Balance			×						×		
3. Positive Impact						×					
4. Entrepreneurship											
5. Positive Work Relationships				×							
6. Financial Security		×									
7. Financial Success		×									
Country-specific factors:											
8. Advancement		×									
9. Job performance					×						
10. Helping organization							×				
11. Challenge	×							×			

** DAIA-CSS = Dual Aspect Importance & Achievement Career Success Scale; ** In our study, overall career satisfaction was a criterion measure, rather than a factor of our SCS measure itself.*

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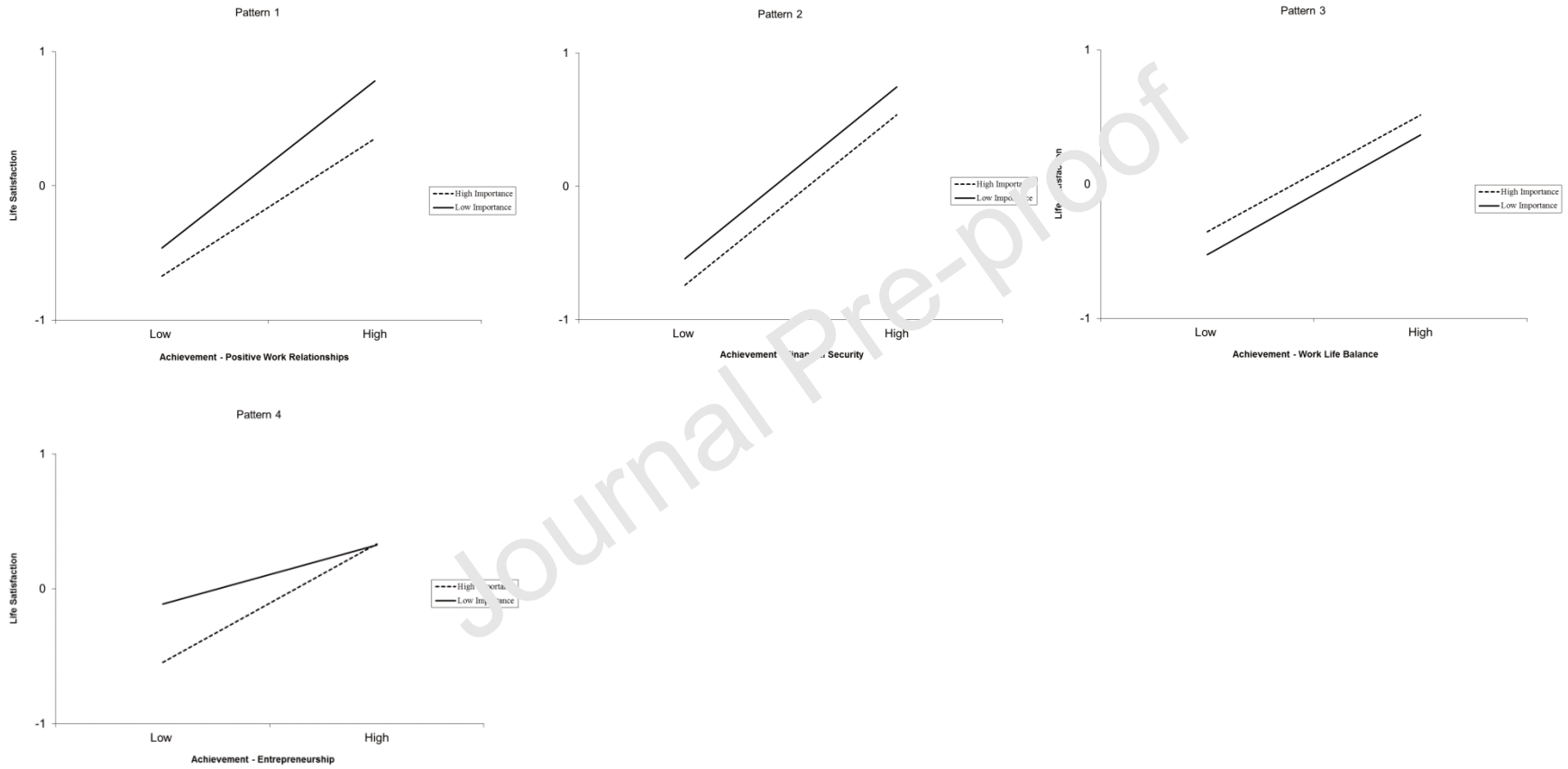
Figure 1. Interaction patterns between achievement and importance of subjective career success dimensions predicting life satisfaction (a comparative view)



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Notes: pattern 1 was observed for Learning & Development, Positive Work Relationships, and Positive Impact; pattern 2 was observed for Financial Security and Financial Success; pattern 3 was observed for Work-Life Balance; pattern 4 was observed for Entrepreneurship.

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Appendix 1. The Dual Aspect Importance & Achievement Career Success Scale (DAIA-CSS)

Our scale covers two aspects of subjective career success on 7 dimensions of career success meanings. Dimensions can be used separately. The two aspects (i.e., importance and achievement) of career success meanings, however, should always be used together in questionnaires while gathering data.

For each of the items in the table below the respondents provide their answer to both leads…

***Importance Aspect*: Thinking about my career success, I consider this career aspect…**

… not at all important (level 1) to very important (level 5)

***Achievement Aspect*: In regard to this career aspect, I have achieved a level I am happy with…**

… strongly disagree (level 1) to strongly agree (level 5)

Dimension / item	Item description
Learning & Development	
LD1	Having the opportunity to be innovative in my work activities.
LD2	Experiencing challenges in my work.
LD3	Continuously learning throughout my career.
LD4	Doing work that gives me the opportunity to learn.
Work-Life Balance	
WLB1	Achieving a satisfying balance between work and family life.
WLB2	Having time for non-work interests.
WLB3	Achieving balance between work and non-work activities.
Positive Impact	
PI1	Contributing to the development of others.
PI2	Helping others.
PI3	Leaving people and places better as a result of my career.
Entrepreneurship	
ENT1	Being self-employed.
ENT2	Owning my own company.
ENT3	Running my own business.
Positive Work Relationships	
PWR1	Experiencing positive relationships with peers and colleagues.

PWR2	Experiencing positive relationships with superiors.
PWR3	Getting positive feedback from supervisors.
PWR4	Getting positive feedback from colleagues.
Financial Security	
FES1	Being able to provide the basic necessities.
FES2	Being able to provide for my family financially.
FES3	Having financial security.
Financial Success	
FSUC1	Achieving wealth.
FSUC2	Receiving incentives, perks or bonuses.
FSUC3	Steadily making more money.

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Conflict of Interest Statement:

Jon Briscoe

July 10, 2020

To the best of my knowledge no conflict of interest exists between any analysis in this paper and any person or organization. Likewise, participation in the study by research respondents did not compel any competing interests as far as the authors could discern.

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Signed Electronically,

Jon Briscoe, July 10, 2020

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CRediT author statement

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Here, There, & Everywhere: Development and Validation of a Cross-Culturally Representative Measure of Subjective Career Success

Highlights

- Present a multi-dimensional culturally-invariant career success scale
- Seven dimensions of career success cross-culturally generated and validated
- Study involved one qualitative and three quantitative studies
- Involved 18, 471 individual respondents from 30 countries.
- The GLOBE and Schwartz cultural clusters were relied upon

ENDNOTES

[i] Unidimensional means that item scores are averaged out into a single scale score.
[ii] Israel was also included, a country which Schwartz considered categorically different from the seven named cultural regions.
[iii] See Supplement for more detailed information on Phase1 interviews and how the 63 items were derived.
[iv] We shifted to the GLOBE (Global Leadership and Organizational Behavior Effectiveness Research Project) cultural regions from the Schwartz model in this stage because while it was similar to Schwartz's model it offered more detail on regions (e.g., Western Europe divided into multiple regions). The GLOBE cultural clusters were developed based upon a comprehensive study of leadership beliefs and behaviors in countries around the world. It GLOBE framework was developed via a major research collaborative lead by Robert House and divides the countries of the world into 10 cultural regions based upon reactions to implicit leadership theories (ILT).
[v] During our between-factor discriminant analysis (see *Convergent and Discriminant Validity* section) we identified another viable empirical model with 6 factors. However, comparisons between models showed that the 7-factor solution was still superior (See supplement, Table 7 for more detail).
[vi] Note that a threshold of 0.45 is considered acceptable for new scales (Netemeyer, Bearden, & Sharma, 2003).
[vii] We added an extra item to the Entrepreneurship dimension ("Running my own business") because the dimension only featured 2 items, which would be problematic for future adoption of this dimension as a self-standing sub-scale. The two original items were based on the original meanings form the qualitative phase. We have already shown that scale featuring 2-item Entrepreneurship has adequate characteristics, in Phase 4 we show that the scale featuring three-item version of Entrepreneurship dimension also has adequate psychometric characteristics.
[viii] The residuals of paired items addressing the same subjective career success meaning for both aspects (i.e., importance and achievement) were constrained to correlate.
[ix] Using the interactive world map tool, readers can look up the descriptive data for their country for each factor, request direct comparisons between specific countries, see clusters of countries grouped together according to their average scores on importance and achievement (mapped onto two dimensions), and consult country-level data from public databases that were used for the project such as GDP, Gini coefficient, Poverty rate, Education/skills level, and others.