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Career stages and occupations impacts on workers motivations

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Career stages and occupations impacts on workers motivations

Abstract

Purpose: The career concept has become fuzzier due to changing work patterns, the ageing workforce, and the environmental changes occurring during employee lifespans. Together this requires a renewed and broader reaching contextualization of this concept. The aim of this article is to set out an integrative approach arguing that the integration of career stage models with occupational groups proves more explanative of intrinsic and extrinsic worker motivations

Design/methodology/approach: Secondary data from 23 European countries was drawn from the European Social Survey 2006. The construct validity and reliability of indicators was analysed. Hypotheses were tested using discriminant analysis.

Findings: Results showed that neither occupations nor career stages are determinants *per se* of intrinsic motivations, but are better explained by their mutual integration. Career stages were shown to predict *per se* extrinsic motivations.

Research limitations/implications: The recourse to the ESS pre-determined scales and the application of age ranges as proxies for careers stages suggested the usage of more specific measures in future studies.

Practical implications: Career management and compensation policies might be better tailored to worker motivations by considering the age ranges (as proxies of career stages) and workers' occupations.

Originality/value: Findings evidenced the explanatory value of occupations for worker motivations and allowed putting into perspective the contextualization of not only boundaryless and protean career concepts, but also career stage theories. Data supports the ecological validity

of applying a career stages and occupations framework to a highly diversified and representative sample of European countries.

Keywords IJM: Careers, jobs, employee attitudes, life planning

Keywords: Career stages, occupational groups, intrinsic motivations, extrinsic motivations, discriminant analysis

Introduction

Concurrently to the changes in organizational structures, labour market regulations and their socio-demographic characteristics are also changing worldwide and particularly in European countries (O'Reilly, Lain, Sheehan, Smale, & Stuart, 2011). Labour markets are evolving into more diverse work forces, more aged workers, and facing a higher incidence of unemployment. These changes interrelate with different structural aspects such as diverse mobility patterns (Barnes-Farrell & Matthews, 2007; Lyons, Schweitzer, Ng & Kuron, 2012), but also with subjective aspects such as attitudes toward development and training (Zwick, 2013). Following the need to focus greater attention on subjective aspects, concepts such as boundaryless and protean careers emerged and pointed to a shift from career policies based on institutional frameworks to a focus on individual agency (Inkson, Gunz, Ganesh & Roper, 2012; Roper, Ganesh & Inkson, 2010).

Theories based on career stages (e.g. Super, 1980; Levinson, 1986) are among those allowing to explain how companies can respond to the development of the self-concepts, agency, and needs of employees along their life-span. In spite of their massive use, some critics have been raised claiming the need of emphasizing the effects of social contexts over personal development (Herr, 1997; Savickas, 2002, 2005), particularly the inclusion of occupations (Ng & Feldman, 2007). In fact, and despite the existing mobility, there are variables that impel employees to maintain their occupations. This occupational embeddedness influences their attitudes, motivations and performance (Ng & Feldman, 2007, 2009), producing a consistency on the subjective evaluations of employees regarding their jobs.

In addition, different occupations present different degrees of complexity, and evidence different degrees of autonomy, influencing their perceived demands (Fila, Purl, & Griffeth, 2017) and satisfaction (Tiegs, Tetrick & Fried, 1992). However, it is not clear into what extent

occupations can have a constant influence over employees' abilities, interests and values, or instead how they impact differently across life stages, providing different development opportunities and environmental influences over the employees. Moreover, understanding the role played by individual variables such as career stages and generic variables like motivations, happiness or satisfaction, might contribute to the on going discussion about the influence of generic constructs on employees' performance and extra-role behaviours (Chiu & Chen, 2005; Cerasoli, Nicklin & Ford, 2014; Paauwe, 2009; Salas-Vallina, Alegre & Fernandez, 2017).

In order to fill the gap concerning the lack of contextualization of career stages theories, and using a framework of occupations to achieve it, we aim with the present study to analyse if career stages have an influence on motivations independent of occupations or, like we sustain, that occupations interact with career stages impacting on the motivational aspects of employees. This is an important aspect for the design of policies, for the advancement of theory and research in this area and that, to our knowledge, has never been addressed by previous studies.

The existence of several studies evaluating the effects of occupations, their associated characteristics, and of career stages on satisfaction and motivation is evidenced by some meta-analysis (Chiu & Chen, 2005; Fila et al., 2017; Loher, Noe, Moeller, & Fitzgerald, 1985; Rudolph, Lavigne, & Zacher, 2017). However, there are no studies that present an integration of these two frameworks across several countries. We sustain that this integration enables approaching the global workforce as a whole (like the one existing in European countries), arguing that the needs of employees are not country dependent, but instead associated with their socio-demographic and occupational characteristics. In this sense, our first goal is to analyse the assumption that the integration of career stages and occupations is not country dependent; instead the integration effects are similar across countries independently of the occupational patterns or the demographic ageing of each country.

Nevertheless, occupations demand different skills, provide distinct opportunities for development and assure diverse rewards. In this sense, we sustain that they influence the motivations of employees in several different ways. Thus, our second research goal is to evaluate the impact of the integration between career stages and occupations on intrinsic motivations and the associated satisfaction derived from performing job tasks without any instrumental purpose. Our third research goal is to analyse the impact of the integration between career stages and occupations on extrinsic motivation and the associated satisfaction arising from job rewards or the prospect of future gains. Through these goals, we aim at deepening the discussion about the contextualization of career stage theories with occupations and its impact on both intrinsic and extrinsic motivations. This discussion allows to draw more fitted career policies that take in consideration the development of employees, but also other organisational phenomena associated with their jobs.

Career Stage Theories and Occupational Groups

Traditional career stage theories (e.g., Levinson, 1986; Super, 1980) have been widely proposed to explain individual worker satisfaction levels and motivations throughout their lifespan. They open an understanding of career mobility and support the design of HR policies more suitable to the age ranges of existing workforces. Moreover, career stage theories have attracted renewed interest especially because of their potential for explaining job-related satisfaction (Jepsen & Sheu, 2003), the commitment workers assume towards their organizations (Ng & Feldman, 2007), and staff turnover (Bedeian, Kemery, & Pizzolato, 1991) to cite just a few examples.

However, the multiple ways in which people perform their life-roles (Savickas, 2005) and the lack of social and cultural contextual variables (e.g., social values, minority group membership,

work settings, economic contingencies; Mayhofer, Meyer, & Steyrer, 2007; Sullivan & Baruch, 2009) explaining these phenomena constitute a major weakness of studies applying these conceptual frameworks. Career stage theories have also been a target of criticism as they return heterogeneous predictions (Sullivan, 1999) and provide rather diverse and sometimes divergent empirical evidence (cf., Cohen, 1991). Indeed, these criticisms sustain how the major problems associated to career stage theories stem from the definition of the career construct in general and the operationalization of career stages in particular.

Despite these criticisms, career stage operationalizations still efficiently predict important outcomes in the working lives of employees. In fact, sociodemographic indicators describing individual paths throughout their working life are still considered generally valid, especially about the regularity of the ages when people leave home, share their lives with a partner, begin having children, attain greater assurance in their professional expertise, to name but a few such facets. These sociodemographic patterns enable the application of age groups as proxies of career stages, as proposed by classic career stage theories (cf., Bedeian *et al.*, 1991; Cohen, 1991; Lam, Ng, & Feldman, 2012), and reflect evidence on how workers often exhibit traditional career stages (e.g., Cabrera, 2009). This empirical evidence testifies to the ‘added value that the traditional career stage approach brings to the analysis of employee working life patterns, apart from reducing the conceptual weakness that has been pointed to in this type of career models (cf., Sullivan & Baruch, 2009).

By the same token, and as different occupations present different demands and lead to different development opportunities, they generate a major influence over the ways workers evaluate and develop (Sullivan, 1999; Otto, Dette-Hagenmeyer, & Dalbert, 2010), as well as determining their levels of work satisfaction and motivation (Chang & Lu, 2009). Furthermore, and since there are low mobility rates between occupations (e.g., Gabriel, 2003; Inkson *et al.*,

2012), we argue that integrating occupations and career stages contributes to a clearer definition of the career concept and of its effects on intrinsic and extrinsic motivations and related satisfaction levels.

Intrinsic differentiations in motivation

In the early stages of their careers, workers may be expected to search for more diverse working experiences, express more interest in and access more opportunities for learning. This allows workers to better define their work interests and thereby sustainably develop their competences to achieve greater self-determination in the exercise of their occupations. Indeed, in early career stages, individuals do display greater motivation to accept changes and express greater intention to seek out new opportunities (Ng, Sorensen, Eby, & Feldman, 2007), as well as greater organizational and occupational mobility.

Later on, in their career development younger individuals at an establishment stage are expected to make more definite decisions regarding their own careers, to have already acquired more professional experience and greater knowledge on the limitations of the labour market while feeling more self-efficacious over achieving results in their careers (Super, 1980). Contrarily, more elderly workers evidence less training needs, ask for more focused training, and might be more sceptical with respect to their work (e.g. Zwick, 2013) and gain fewer opportunities for learning (e.g., Maurer, 2001).

Within this context, we argue that the integration between the two frameworks can be more explanatory of employees’ motivations. In fact, the interests and opportunities for learning are highly occupationally dependent in agreement with whatever the usages a worker may actually apply learned knowledge to (Tiegs *et al.*, 1992). Thus, workers in less skilled occupations gain

fewer opportunities for learning with their accumulated knowledge, turning out less useful for career progression or for raising their employability opportunities.

On the other hand, in more skilled occupations, we predict that workers starting their careers (i.e., in their trial and establishment stages) display more interest and search out for more learning opportunities. Workers correspondingly might perceive themselves as more self-determined when applying their skills and competences, since both their occupations and career stages present greater opportunities for progression (Ng & Feldman, 2007). Inversely, workers in later career stages (i.e., maintenance and decline stages) and in less skilled occupations will perceive fewer opportunities for learning and encapsulate themselves as less interested in learning. Also, they will feel less self-determined, present fewer opportunities and demand less application of learned competences, with working procedures tending to be more standardized and inherently allowing less space for autonomy.

In this sense, we consider that the integration between career stages and occupations is more explanative than career stages or occupations *per se*, which leads us to hypothesise that intrinsic motivations will be greater in individuals in their trial and establishment career stages working in more skilled occupations. By the same token, intrinsic motivations will be smaller in individuals in their maintenance and decline career stages working in less skilled occupations (H1).

Extrinsic motivations differentiation

Occupations play a determinant role in the definition of professional status and the feasibility of satisfying individual needs (cf., Mayhofer *et al.*, 2007). The literature furthermore verifies that individuals in more skilled occupations and positions with higher supervisory responsibilities perceive themselves as having attained greater social status and display more expressive and emotional social interactions (Conway, DiFazio, & Mayman, 1999), endowing them with greater

powers of negotiation and knowledge about their social environments and possible rewards. Additionally, more skilled jobs in organizations present greater working autonomy, thereby fostering higher work morale and more satisfaction from the tasks performed (Chang & Lu, 2009).

Conversely, low skilled occupations are linked to lower autonomy levels and fewer opportunities for influence and control, which in turn determines the scope of workplace development and participation, the types of emotions and stress levels (Chang & Lu, 2009), and even worker satisfaction levels. In these occupations, a career plateau is reached at an earlier phase that implies a reduction in expected increments to rewards.

Furthermore, we maintain that the valuation of extrinsic aspects to work differs between individuals in different age groups. In fact, in age groups associated with later career stages, individuals tend to search for greater benefits and rewards from their jobs, be prouder of past achievements and become less demanding relative to the intrinsic characteristics of work, thus registering greater satisfaction with their actual occupations (Bedeian *et al.*, 1991). This greater experience of satisfaction may also be due to their life-long learning process regarding how they balance their family and occupations (Baltes & Young, 2007).

Moreover, we consider that the integration between career stages and occupations can evidence a better understanding of job satisfaction and extrinsic motivations. We contend that individuals in more skilled occupations receive more benefits and higher levels of reward than individuals in less skilled occupations. Additionally, we also argue that workers in more skilled occupations with higher responsibilities and who are in their establishment or decline stages will return higher levels of extrinsic motivation, both because they present greater recognition needs (Super, 1980) and also because their occupations enable them to satisfy those needs.

These individuals in more skilled occupations also possess higher material and social capital resources enabling them to better integrate work, family and community commitments. In the same

vein, and mainly due to their occupational role and the professional status received, these workers show higher recognition needs not only in their occupations but also in their families and the communities they are involved in (Ng & Feldman, 2007). For example, and more specifically, work satisfaction acquires greater importance as workers become more aged with this effect particularly pronounced in higher status occupations (Riordan, Griffith & Weatherly, 2003). These differences might be attributed to higher perceived stability and security within senior workers in higher status occupations and to the greater facility with which senior workers accomplish their expectations, thereby perceiving greater extrinsic motivations (Barnes-Farrel & Matthews, 2007).

Within this line of reasoning, and similarly to our first hypothesis, we consider that the integration between career stages and occupations is more explanative of extrinsic motivations than career stages or occupations by themselves. Accordingly, we propose that extrinsic motivations will be higher for workers in maintenance and decline career stages, especially for those in higher skilled occupations. Extrinsic motivations will be lower for individuals in trial and establishment career stages in less skilled occupations (H2).

In a nutshell, the purpose of this article is thus to test an integrative framework of age groups as proxies for career stages with occupations and its capability for explaining worker satisfaction levels and other intrinsic and extrinsic motivations. We consider that the integration of the two frameworks of career stages and occupations is more explanatory than each one by itself. In figure 1, we graphically present the contrast between the original frameworks and our resulting hypothesis taking into account the operationalisations set out in the method section. The hypotheses presented above were tested using large and representative samples from different European countries.

Insert Figure 1 here

Method

Data and Sample

In order to analyse our hypotheses, we have made recourse to secondary data from 23 European countries taken from the European Social Survey 2006 (European Social Survey Round 3, 2008) and tested the possibility of collapsing data from different countries into a unique sample of working respondents. The European Social Survey is a comparative biennial survey project featuring rigorous control over the representativeness of population socio-demographic characteristics. Thematic modules compose each wave, and regular modules integrate socio-demographic and the social value characteristics of populations.

We used a sub-sample of individuals currently in employment ($N = 31,739$) taken from the ESS 2006. Young respondents without working experience, voluntarily or involuntarily unemployed individuals, as well as retired respondents were screened out of our analyses. Individuals that did not mention their occupation were also dropped, reducing the total sub-sample by 11.9%. The final sample used 27,035 respondents (47.3% female) distributed across 23 European countries, with ages between 15 and 91 years ($M = 40.1$; $SD = 12.5$). Respondents had completed an average of 13.3 years of education ($SD = 3.5$) (distribution of the sample by occupations, career stages by countries are presented on table 1).

Insert Table 1 here

Predictors or Independent Variables

Age groups as proxies of career stages: As previously mentioned, the recently published literature presents reasonable arguments for applying age groups as proxies of career stages (cf. Lam *et al.*, 2012). Following these studies, we made recourse to this same strategy. In order to

define the age groups associated with career stages proposed in Super's (1980) typology, we decided to adopt the age ranges proposed by Cohen (1991) and tested by Bedeian *et al.* (1991; for a similar procedure, see Lam *et al.*, 2012). Applying this categorization, sample respondents were structured into the following ranges: the trial stage corresponds to the 15 to 29 year-old interval ($N = 6,349$; 22.7% of total sample); the establishment stage corresponds to the 30 to 39 year-old interval ($N = 6,279$; 22.5% of total sample); the maintenance stage corresponds to the 40 to 49 year-old interval ($N = 7,777$; 27.8% of total sample); and the decline stage corresponds to ages equal or higher than 50 years-old ($N = 7,590$; 27.0% of total sample).

Occupational groups: similarly, and as we sought to analyse the effects of occupations on respondent job-related satisfaction and intrinsic and extrinsic motivations, we chose to classify occupations into four clearly distinguishable groups, while maintaining the internal coherence for each category. This classification process was based on ISCO, an international classification system backed by the International Labour Organization – United Nations.

In this sense, a first group of “craft workers / operators” included less skilled occupations such as labourers, truck drivers, machine operators, craft workers ($N = 10,056$; 36% of total sample). This group corresponds to ISCO's 7th, 8th, and 9th major occupation groups. A second group of “clerks and skilled workers” incorporated more skilled occupations associated with a certain degree of specialization, such as secretaries, administrative workers, sales supervisors, chefs, health assistants ($N = 6,869$; 24.5% of total sample). This group corresponds to ISCO's 4th, 5th, and 6th major occupation groups. A third group of “professionals and technicians” featured the higher skilled occupations with high levels of professional or technical knowledge and experience, and that do not necessarily involve supervisory responsibilities and, for example, including lawyers, engineers, teachers, medical doctors, etcetera ($N = 8,664$; 31.0% of the total sample). This group corresponds to ISCO's 2nd and 3rd major occupation groups. Finally, a group of “managers

and directors” included occupations related to planning, organizing, as well as work coordinating responsibilities, such as intermediate managers and directors ($N = 2,366$; 8.5% of the total sample) and corresponds to ISCO's first major occupation group.

Integration of career stages with occupations: in order to test the integration of career stages with occupations, we established a new index that resulted from cross referencing these two variables. The percentages resulting from this recoding are presented in table 2.

As can be seen from table 2, there is a homogeneous distribution of career stages throughout the different occupations. Managers are one exception since they present higher percentages in later stages due to their commonly vertical career progressions.

Insert Table 2

Dependent Variables

The dependent variables adopted in this study were chosen from those incorporated into the ESS 2006 survey. These variables were organized into four theoretically oriented dimensions: respondent perceptions regarding job-related satisfaction and perceived respondent self-determination (Ryan & Deci, 2001); perceptions of social recognition (Siegrist, Starke, Chandola, Godin, Marmot, Niedhammer, & Peter, 2004); and perceptions as to interest and opportunities for learning (Kashdan, Rose, & Fincham, 2004). As we detailed above, these dimensions correspond roughly to intrinsic and extrinsic motivations, as well as to job-related satisfaction and represent important dimensions in the descriptions of respondent careers (cf., Ng *et al.*, 2005). These dimensions are also crucial to understanding the shifts in careers as they progress over time.

Intrinsic motivations – self-determination: To operationalize respondent perceptions of self-determination, the following items from ESS 2006 were used: “In general, I feel very positive

about myself.” (1 = Totally disagree to 5 = Totally agree), adapted from the Ryff (1989) Self-acceptance scale; “I’m always optimistic about my future” (1 = Totally disagree to 5 = Totally agree); “I feel I am free to decide for myself how to live my life” (1 = Totally disagree to 5 = Totally agree), adapted from the Ryan and Deci (2001) Autonomy scale.

Intrinsic motivations – interest and opportunities for learning: The operationalization of respondent perceptions regarding their interest in and opportunities for learning deployed two ESS 2006 items: “I love learning new things” (1 = Totally disagree to 5 = Totally agree), adapted from the Petersen and Seligman (2004) VIA questionnaire; and “...please tell me to what extent...you get a chance to learn new things?” (0 = Never to 6 = Always), adapted from Huppert, Marks, Clark, Siegrist, Stutzer, Vittersø, and Wahrendorf (2009).

Extrinsic motivations – social recognition: Three ESS 2006 items were used to operationalize this dimension: “...please tell me to what extent...you feel that people treat you unfairly?” (0 = Always to 6 = Never), adapted from the Antonovsky (1993) Sense of Coherence scale; “...please tell me to what extent...you feel that people treat you with respect?” (0 = Never to 6 = Always), adapted from Huppert *et al.* (2009); and “...please tell me to what extent...you feel you get the recognition you deserve for what you do?” (0 = Never to 6 = Always) adapted from the Siegrist *et al.* (2004) effort/reward imbalance scale.

Job-related satisfaction: To operationalize the job-related satisfaction dimension, we made use of three ESS 2006 items: “All things considered, how satisfied are you with your present job?” (0 = extremely to 10 = extremely satisfied), adapted from the British Household Panel Survey (wave 13; 2005); “How much of the time do you find your job...interesting?” (0 = never to 6 = always), adapted from Huppert *et al.* (2009); “How satisfied are you with the balance between the time you spend on your paid work and the time you spend on other aspects of your life?” (0 = extremely dissatisfied to 10 = extremely satisfied).

Method

The European Social Survey (ESS) 2006 wave contained a module associated with age differences concerning work, on which we based our analysis. The decision to carry out this study considered the limitations of data collection as some indicators do not directly link with job contexts, instead conveying general motivations, which correspond to how people face their careers and manage their lives. To surpass this limitation, we began by examining the items relating to intrinsic and extrinsic motivations and job-related satisfaction contained within the ESS 2006 survey, determining their construct validity and reliability, and then afterwards evaluating the congruence of the results returned with already existing studies applying more specific measures.

In terms of the data analysis strategy, and in agreement with recommendations from previous studies in this field (Bedeian *et al.*, 1991), we used discriminant analysis to test our hypothesis as this simultaneously allows for determining the variables that better discriminate the groups before then evaluating what were the group characteristics associated with the differentiation (Klecka, 1980).

In agreement with these methodological recommendations (Bedeian *et al.*, 1991), we first ran multivariate analysis of variance (MANOVAs) to test whether the proposed variables were explained by the age ranges associated with career stages, secondly by occupations and finally by integrating the career stages and the occupations. After verification of the feasibility of these groups explaining the variables under study, we deployed discriminant analyses to determine to what extent our dependent measures help us in clearly differentiating between respondent groups based solely on their age ranges without relating with occupations, secondly on occupations without relating with the age ranges associated with career stages, or whether instead better

differentiated by integrating their career stages and occupations. Finally, we analysed if the differences between the groups were in accordance with our proposed hypotheses.

Results

Construct Validation of Dependent Variables

These different items were subject to principal axes factoring analysis (PAF) in order to validate the aforementioned dimensions. Some of these items do not share the same underlying measurement scale and were accordingly standardized prior to factorial analysis. In agreement with our predictions, the PAF with *promax* rotation extracted four factors explaining 61.81% of total variance (explained factor variance ranging from 18.34% to 12.40%), and item loadings on respective factors ranging from 0.83 to 0.51. The adequacy criterion of this solution to the present sample was good ($KMO = 0.78$; $N = 27035$). In table 3, we present the inter-relations between these four factors and the major diagonal displays each factor's reliability. In general terms, the dimensions extracted by the PAF were positively and significantly associated. More specifically, and in accordance with our expectations, the measures pertaining to intrinsic and extrinsic motivations were positively and significantly correlated. As we also expected, the job-related satisfaction measure correlated significantly with the motivation measures.

Insert Table 3 here

Differences or similarities across European Countries

While not producing any specific hypothesis, and aiming answering to our first research goal, we propose that the integration of occupations and career stages produces a framework of analysis that is country independent. This allows us to test our hypotheses collapsing the whole sample

without the need of an analysis country by country. Basically, we therefore consider that the needs of a middle age manager in Slovakia are not especially different to a middle age manager in UK, or that the motivations of professionals at the beginning of their careers will be similar across European countries. However, so as not to take our assumptions for granted, we furthermore completed a statistical test to evaluate the scope for collapsing the sample and thus testing our framework for European countries as a whole. Thus, we calculated the intraclass correlations (ICCs) of the dependent variables of the present study. These ICCs demonstrated that there is insufficient variance left at an aggregate level to justify conducting analyses by country or groups of countries (i.e., multilevel analyses; $ICC_{\text{Job-Satisfaction}} = 4.93$; $ICC_{\text{Social Recognition}} = 5.58$; $ICC_{\text{Self-Determination}} = 4.98$; $ICC_{\text{Interest and Opportunities for Learning}} = 4.75$). As expected, no differences between our variables were found due to country level variations and therefore the complete working respondent sub-sample in the ESS 2006 was deployed and capitalising on its ecological validity.

Evaluating the explanatory possibilities of career stages, occupational groups and the integration of career stages and occupational groups

Different MANOVAs were computed in order to identify the sensitivity of the dependent variables regarding the proposed career stages and occupation measures (i.e., our independent variables). Specifically, and following Bedeian *et al.* (1991), three MANOVAs were ran while keeping constant the same set of dependent variables (job related satisfaction, social recognition, perception of self-determination and interest and opportunities for learning) and varying the independent variables – in the first analysis, we checked the impact of career stages; in the second, the impact of occupations; and in the third analysis, the impact of the index integrating career stages and occupations.

Regarding the first MANOVA, our results returned a significant multivariate career stage effect on the dependent measures, $F(12,67638) = 79.72, p < .000, \eta_p^2 = .004$; in the second analysis, this time regarding occupations, a similar result was obtained, $F(12,66678) = 124.42, p < .000, \eta_p^2 = .02$; and, finally, the results from the third MANOVA revealed a significant multivariate effect to the career stage and occupation index, $F(60,88860) = 44.00, p < .000, \eta_p^2 = .03$. Briefly, these results showed that the dependent variables were generally sensitive to variations in the age groups associated with career stage, in occupation variables, but also to the more specific groups formed by the integration of career stages and respondent occupations.

Discriminant Analyses

Still in keeping with the Bedeian *et al.* (1991) recommendations to scrutinise more closely the significant effects obtained by the MANOVAs, we ran three discriminant analyses (one for each independent variable)¹. Discriminant analysis aims at finding linear combinations of correlates, i.e., canonical discriminant functions, which maximize the differentiation between groups. Over and above the interpretation advantages offered by discriminant analysis in testing our assumptions simultaneously, this statistical procedure is particularly adequate for dependent measures presenting some degree of association (Klecka, 1980), as is the present case (see table 4). In this way, we may simultaneously evaluate not only what variables best differentiate the groups but also whether the groups composed solely by career stages differences or occupational differences would attain less explanative variance when compared with the groups formed by the career stages and occupations of respondents.

¹ Individual ANOVAs were ran in order to analyse the impact of our independent variables on each dependent measure. Similar results to the MANOVAs and discriminant analyses were obtained. However, this approach is less parsimonious and does enable the simultaneous testing of our hypotheses.

Regarding the discriminant analysis results, and in order to explore the differences between groups, we opted to examine the structural coefficients (Klecka, 1980) isolating the variables best discriminating the individuals belonging to each group under analysis. By the same token, and in order to evaluate the explanatory power of the different discriminant functions, we applied the analogous ω^2 index since this is deemed appropriate to representing the variance explained by each of the discriminant functions while overcoming any eventual sampling biases (Kim & Oljnik, 2005).

Taking into account the multivariate effect of career stages in our dependent variables (see the MANOVA results described above), the first discriminant analysis was deployed for the four age groups associated with career stages as the grouping variable and the four dependent measures as the discriminant variables. This analysis revealed a sole statistically significant discriminant function ($p < .01$) with an analogous ω^2 index of 4.2, showing how 4.2% of the dependent variable variance was attributable to differences observed in the career stages groups taken solely and without relating to occupations.

The second discriminant analysis, following the significant multivariate effects obtained from the occupation variable, deployed the four occupational groups described above as the grouping variable and our four dependent measures as discriminant variables. This analysis revealed a sole statistically significant discriminant function ($p < .01$), with an analogous ω^2 index of 6.7, meaning that 6.7% of the dependent variable variance stemmed from differences existing between occupational groups. Thus, and compared to the previous discriminant function, this analysis revealed that these dependent measures contributed to a better discrimination of individuals when grouped in terms of their occupations. Alternatively expressed, these results evidenced that respondents from similar occupational groups presented more homogeneous perceptions

independent of their career stages and that the explained variance was higher than when grouped solely by their career stages.

Insert Table 4 here

Finally, the third discriminant analysis applied the index of career stages and occupational groups as the independent variable, and the four dependent variables as discriminant variables (see table 4, functions 1 and 2) and yielded two statistically significant functions ($p < .01$): the first with an analogous ω^2 index of 11.5 and the second function with an analogous ω^2 index of 5.0. When these two functions are simultaneously grouped, a higher percentage of explained variance was obtained (16.5%) and, above all, a more comprehensive picture of how motivations and perceived job-related satisfaction deriving from career stages may be integrated into the occupational groups associated to employment opportunities. Confirming our integrative framework, these last results allowed us to underline how the contextualization of career stages with occupational groups not only generated a better theoretical understanding of motivation and job-related satisfaction, but also a better explanation of this phenomenon from a statistical point of view. This result somehow corresponds to the criticism raised over the lack of contextualization of career stages theories and furthermore enhancing the fact that people live out their career stages differently in accordance with their respective occupations.

As the third discriminant analysis displayed a greater explanative value, we first analysed it by taking each discriminant function into account separately before then considering their associated group centroids. The structural coefficients of the first function (see table 4, function 1), associated with the discrimination of occupational groups divided across career stages, evidenced how groups were mainly characterized by their interest and opportunities for learning

(.94) and by respondent job-related satisfaction (.56). Briefly, this function was mostly bound up with the intrinsic characteristics of work.

Nevertheless, when considering the structural coefficients of the second function (see table 4, function 2), we found them not only characterized by job-related satisfaction (.62) but also by social recognition (.54), a result that points to the fact that function 2 related to extrinsic motivations. Considering how job-related satisfaction results from attaining both intrinsic and extrinsic motivations, it is therefore unsurprising that this variable appeared in both functions.

Focusing now on the function 1 centroids, i.e., on the way this function discriminated between the groups under analysis, we found that the more skilled occupational groups and respondents in their initial career stages returned higher centroid values (professionals in trial career stages: .40; professionals in establishment career stages: .31; managers in trial career stages: .37; and managers in establishment career stages: .32), contrasting with occupational groups with lower skill levels and in later career stages (manual workers in maintenance career stage: -.40; manual workers in decline career stage: -.39; clerks and qualified staff in career maintenance stage: -.16; clerks and qualified staff in career decline stage: -.18). Thus, the centroids associated with this function discriminated between occupational groups with more skills and in initial career stages from less skilled occupational groups and in the later stages of their careers in terms of both their greater interest and learning opportunities. Nevertheless, we expected that in conjunction with this greater interest in learning, these groups would also be differentiated in terms of their greater perception of self-determination. However, this variable displayed a lower discriminative value.

In a nutshell, we can conclude that the differences between occupational groups characterized in terms of the age ranges associated with career stages are specified by their greater interest and opportunities for learning and higher job-related satisfaction for those respondents in their initial

career stages, especially in more skilled occupations. This result is in keeping with our first hypothesis.

Finally, on analysing the centroids relating to the second discriminant function, we encountered a relatively different picture of this phenomenon, i.e., they dissociated later career stages – more specifically, the decline stage (manual workers: .20; clerks and qualified staff: .33; professionals: .21; managers: .32) from initial stages, i.e., the trial stage (manual workers: -.34; clerks and qualified staff: -.32; professionals: -.15; managers: -.35). Considering that the aspects defining this function were mainly associated with both social recognition needs and job-related satisfaction, we may state this function is mainly affected by respondents grouped by career stage and that this downgrades the occupational group contribution. In this context, these results lent credence to extrinsic needs being well explained by career stages and not by occupational groups. These results did not entirely support our second hypothesis.

Discussion and Conclusions

In this article, we presented empirical evidence in support of a model integrating predictions deriving from career stage models and occupational groups. In fact, we made salient the argument that neither occupational groups nor career stages are determinants *per se* of intrinsic and extrinsic motivations. In order to test our integrative framework, three discriminant analyses were ran. The results obtained revealed that the third discriminant analysis, i.e., the one integrating career stages and occupational groups, presented the highest level of explained variance (16.5%), when compared to the first discriminant model testing career stages (4.2%), or even the second analysis testing the effect of occupational groups (6.7%). In a general way, these results clearly supported our proposition of an integrative framework for explaining intrinsic and extrinsic motivations and job-related satisfaction in large and representative samples of workers from different countries.

Furthermore, the two functions found in the third discriminant analysis generally supported our hypotheses. In fact, the results of the first function showed that professionals with higher skilled occupations, and in initial career stages, were above all characterized by their greater eagerness for learning, in contrast to craft workers in later career stages. Moreover, these same results also showed that respondents in higher skilled occupations, and in the initial stages of their career, were better characterized by their job-related satisfaction, contrary to those in less skilled occupations. These motivations were not equally shared either across occupations or in terms of career stages. This might have great influence on how workers deal with new job challenges inside their organisations or even search for more enriching jobs outside of their organisations. Accordingly, the applicability of this new career concept might be limited to some groups of workers (Roper *et al.*, 2010; Inkson *et al.* 2012), especially the more skilled workers who have correspondingly greater opportunities for development, but also their younger peers, which might stem from the ways in which this age group approaches the labour market. This latter aspect might be subject to discussion if our data did in fact display evidence characterizing the younger age group associated with initial career stages. This might also arise from a generational dimension (Lyons *et al.*, 2012) but nevertheless leaves open a field for defining the extent of applicability of these new career concepts. The results on learning and satisfaction also served to enrich discussions on career plateaus in pointing out how subjective aspects are indeed interrelated with the structural aspects of careers (Nachbagauer & Riedl, 2002) as it is the case of craft and operational workers.

The results of the second function reported on how workers in later career stages valued more extrinsic aspects of work, such as recognition, and expressed greater job-related satisfaction when compared with workers in initial career stages. This effect was found to be independent of worker occupations, a result that did not totally support our hypothesis. In fact, we argued that workers in later career stages and in more skilled occupation would attribute greater value to extrinsic aspects

of work. However, the results of this function provided evidence that career stages played a major role in explaining this type of motivation regardless of occupational groups.

To sum up, and based on our results using a large European sample, we conclude that an integrative model for characterizing individuals in terms of their occupations and career stages provides us with a richer and clearer picture of what distinguishes different occupation groups and the motivations that can be explained through this integration. At a theoretical level, these results are relevant since they evidence that individual career stage frameworks can explain by themselves extrinsic motivations or integrating with occupations can explain intrinsic motivations which are antecedents of performance. These results contribute to the on going discussion regarding individual-level explanatory constructs of performance (Paauwe, 2009, Salas-Vallina, *et al.* 2017). More specifically, our study highlights the importance of taking into account the occupations of employees, which is a framework not much explored on motivation studies (see the meta-analysis conducted by Cerasoli *et al.*, 2014). More specifically, our results evidence that the subjectivity of the different phases of development is affected by occupations concerning intrinsic motivations, and possibly how employees make meaning of the demands and resources associated with the design of their specific jobs.

The integrative model also contributes to clarifying the claims made by the critics of the original career stages theories (eg. Herr, 1997; Savickas, 2002, 2005), namely by showing that work roles provide experiences allowing the development of the self-concept. Looking to our data, this seems much related with the learning possibilities associated with occupations. Conversely, we argue that the relations between job characteristics and outcomes (Chiu & Chen, 2005; Loher, *et al.* 1985; Tiegs, *et al.* 1992) as our data show greatly depend of the development stage of the employee, which is an aspect that so far is not much explored. We sustain that the meanings and perceived responsibility that employees extract from their jobs are different according to the

developmental phase they are in, and to the other experiences associated with the other roles that people perform (social, familiar, etc.). However our results point to the meanings that are attributed to external rewards might not be dependent of the job that is performed, but more to the ways that people value them across their life span independent of their occupations, thus highlighting the initial predictions of the career stage theories (Super, 1980). We sustain that our finding point in the same direction as Inkson *et al.* (2012) regarding the need for looking to structural aspects of careers. Moreover, our results show that the developmental motivations in occupations such as managers and professionals are indeed different from craft and operator workers, thus more specifically framing how concepts of boundaryless and protean careers might be applied to the different occupational groups.

Additionally, our results are informative for career stage models *per se* since they were obtained from large and representative samples. In fact, we do not know of published research that has tested these models in such an extensive way. Moreover, these results also highlight how the use of age groups is a reasonable proxy for worker career stages, since they enabled us to statistically confirm the theoretical assumptions that the literature presents on career stages (Super, 1980; Levinson, 1986) and answering some of the previous criticisms raised (Mayhofer *et al.*, 2007; Sullivan & Baruch, 2009), specifying its application regarding occupational groups.

Apart from generally supporting our predictions, and clarifying the career concept, particularly by demonstrating the direct effect of skills on extrinsic motivations, our results have different and important implications at an applied level. They evidence that well-being resulting from job satisfaction is not only a matter of the jobs people perform, but also of the career stages people experience. These results also reflected how this type of satisfaction not only depended on country characteristics – since we collapsed the European countries included in the survey – but also on the characteristics of jobs and individual career stages.

The results obtained also highlight the limits of career policies in setting out how occupational groups have a profound effect and to the extent of restraining the scope for policies such as mentoring and training, especially in less skilled occupations. In fact, this may prove to be the case because individuals in these occupations quickly reach levels of competence with reduced subsequent professional challenges. One possible solution to counter this situation would be promoting greater mobility within organizations, even while this would have to overcome both the differing skill levels and the restrictions imposed by collective bargaining in some countries and in some sectors of activity. Regarding workers in higher skilled occupations, HR practitioners might focus upon developing challenging career policies to satisfy intrinsic employee needs and retain and profit from human resource investment in members of staff, especially when in their initial career stages.

In this article, we also argued that job-related satisfaction would display a similar pattern of results to those obtained for extrinsic motivations. However, our results discriminate between worker groups and their perception of satisfaction in distinct ways. This perception may be deployed to distinguish between workers either when associated with intrinsic motivations (function 1) or with extrinsic motivations (function 2). In the first case, when satisfaction was linked to intrinsic motivation, this distinguished between workers in different career stages when taking their occupations into account. In the second case, when satisfaction was correlated with extrinsic motivation, this better distinguished career stages independent of occupation.

This sends out a strong signal that organizations should enact better career stage plans linked to compensation strategies and policies. This also reveals how fairness judgments become more accurate in individuals in later rather than in initial career stages, and that worker satisfaction may be linked with higher compensation levels, but is particularly fostered by benefits able to enhance perceived recognition and status. This might be of major importance when organisations need to

retain certain employees but lack the opportunity to promote them to higher career levels given the individuals concerned have already reached their career plateau. In this sense, organizations might approach recognition schemes from a more social or monetary perspective.

Nevertheless, the usage of age groups as career stage proxies might limit more stringent analyses of career effects on intrinsic and extrinsic motivations. To surpass this limitation, and in future studies, it would be interesting to analyse other career stage proxies, such as the ages people leave home at, start having children, attain their professional expertise, to name but a few, and integrate them with occupational groups to test their effects on worker motivations. Furthermore, in our study we have used some indicators that are not directly related with the work context, but that reflect general motivations that correspond to how people perceive their careers and manage their lives. Thus we consider that more specific operationalizations of our dependent variables, as well as new variables measuring other motivational aspects (e.g. rewards and benefit preferences), should be applied in future studies.

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Table 1: Sample composition in terms of career stages and occupations by country (percentages)

Country	N	Occupational Groups				Career Stages			
		Craft workers/Operat.	Clerks/Skilled	Professionals/Techn	Managers/Directors	Trial <30	Establishment 30-39	Maintenance 40-49	Decline >50
Austria	1.648	23%	39%	31%	7%	32%	18%	29%	21%
Belgium	1.136	26%	23%	42%	10%	30%	22%	28%	21%
Bulgaria	817	42%	22%	26%	9%	23%	21%	24%	32%
Switzerland	1.103	26%	22%	45%	7%	19%	22%	27%	31%
Cyprus	546	31%	39%	30%	0%	23%	23%	29%	25%
Germany	1.810	32%	25%	38%	5%	26%	17%	29%	29%
Denmark	991	26%	19%	39%	16%	19%	21%	25%	35%
Estonia	1.032	44%	16%	29%	11%	32%	17%	23%	28%
Spain	1.242	37%	34%	20%	9%	32%	25%	23%	19%
Finland	1.266	34%	24%	33%	10%	28%	19%	22%	31%
France	1.277	28%	24%	40%	8%	23%	25%	26%	26%
United Kingdom	1.445	27%	32%	26%	16%	24%	22%	24%	30%
Hungary	761	44%	31%	24%	1%	24%	26%	21%	28%
Ireland	1.032	25%	28%	31%	15%	27%	24%	20%	29%
Netherlands	1.102	22%	23%	40%	15%	21%	26%	26%	27%
Norway	1.309	26%	28%	40%	6%	26%	20%	24%	29%
Poland	1.093	49%	20%	21%	11%	40%	22%	21%	17%
Portugal	1.300	46%	34%	17%	3%	24%	27%	22%	27%
Russian Federation	1.546	41%	19%	34%	6%	33%	21%	23%	23%
Sweden	1.464	25%	28%	40%	7%	26%	22%	20%	32%
Slovenia	894	35%	25%	31%	9%	36%	18%	25%	20%
Slovakia	1.184	44%	20%	28%	8%	32%	24%	21%	23%
Ukraine	1.037	34%	19%	34%	12%	31%	23%	21%	26%

Table 2: Sample composition in terms of career stages and occupations (percentages)

Career Stages	Trial <30	Establishment 30 to 39	Maintenance 40 to 49	Decline ≥50	Total
Occupational Groups					
Craft workers/operators	8.4	7.4	9.7	10.4	36.0
Clerks and skilled workers	7.6	5.2	6.5	5.3	24.5
Professionals and technicians	5.9	8.0	8.6	8.5	31.0
Managers and directors	0.7	1.9	3.0	2.8	8.5
Total	22.7	22.5	27.8	27.0	100.0

Table 3: Factor inter-correlations and reliability coefficients

Dimensions	1	2	3	4
1 – Job-related satisfaction	(0.71)			
2 – Social recognition	0.37*	(0.65)		
3 – Self-determination	0.28*	0.30*	(0.60)	
4 – Interest and opportunities for learning	0.28*	0.31*	0.26*	(0.31)

Notes: * Pearson r , $p < 0.01$ (two-sided); diagonals (1.1), (2.2) and (3.3) report Cronbach α internal consistency coefficients; diagonal (4.4) presents a Pearson r reliability coefficient.

Table 4: Discriminant analysis of career stages crossed with occupations

	Function 1		Function 2	
	Structural coefficients	Standardized weights	Structural coefficients	Standardized weights
1 – Job related satisfaction	0.56	0.37	0.62	0.67
2 – Social recognition	0.30	-0.11	0.54	0.61
3 – Self-determination	0.31	-0.01	0.03	-0.58
4 – Interest and opportunities for learning	0.94	0.87	-0.19	-0.41
ω^2	11.5		5.0	
Group centroids				
Career stages x occupations:				
Craft workers <30	-0.07		-0.34	
Craft workers 30 to 39	-0.24		-0.22	
Craft workers 40 to 49	-0.40		-0.16	
Craft workers >=50	-0.39		0.20	

Clerks & skilled <30	0.22		-0.32	
Clerks & skilled 30 to 39	-0.04		-0.09	
Clerks & skilled 40 to 49	-0.16		0.11	
Clerks & skilled >= 50	-0.18		0.33	

Professionals < 30	0.40		-0.15	
Professionals 30 to 39	0.31		0.00	
Professionals 40 to 49	0.22		0.18	
Professionals >= 50	0.23		0.21	

Managers < 30	0.37		-0.35	
Managers 30 to 39	0.32		0.01	
Managers 40 to 49	0.19		-0.02	
Managers > 50	0.14		0.32	

Figure 1 – Theoretical predictions and hypotheses integrating career stages and occupations to predict motivations

