

# Measuring Young Graduates' Job Quality Through a Composite Indicator

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**Abstract** The aim of the article is to propose a job quality composite indicator (JQCI) by which to measure the quality of young graduates' jobs. We design JQCI by grouping jobs' objective and perceived characteristics into three dimensions—economic, professional, and work–life balance—following a theory-driven approach, and weighting each dimension according to its importance. We apply the resulting JQCI to a sample of Italian graduates 3 years after graduation and validate it by measuring their motivation to leave their jobs, assuming that poor quality could be a reason to want to leave a job. We find that the professional dimension scores the highest. Relevant differences in job quality are related to individual (gender, degree level, disciplinary field, whether the graduate worked while studying) and organizational characteristics (company size). Implications for policy-makers and for firms interested in attracting and retaining Generation Y workers are discussed.

**Keywords** Job quality · Composite indicator · Young graduates · Multi-faceted approach

## 1 Introduction

The issue of job quality is part of the Europe 2020 agenda: the targets related to increasing the employment rate and education level of younger workers require concrete actions in order to ensure good working conditions, flexibility, and security in the national labor markets (Drobnič et al. 2010). The issue's centrality in the political and social agenda has

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fostered studies that measured job quality at the macro level as an indicator of a country's social development or that made comparisons across states (e.g., the Leaken indicators the European Council proposed in 2001 (Atkinson et al. 2004) or the measurement of "decent working conditions" the International Labour Office proposed (Anker et al. 2003).

Measuring job quality requires considering *what* characteristics should be included in the measure and *how* to evaluate the job. Can a single variable, such as salary level, satisfactorily approximate the job quality level, or should we consider a set of characteristics? Should the measure consider subjective perceptions (e.g., job satisfaction, perceived career opportunities), objective attributes (e.g., contractual stability, working hours), or both?

We contribute to this debate by proposing a job quality composite indicator (JQCI) with which to measure the quality of young graduates' jobs. The JQCI has been applied to a sample of 2,436 recent graduates who are working in Italy. We adopt a multi-faceted approach to designing this indicator, considering both objective and subjective characteristics of jobs. The value and validity of the multi-faceted approach has received increasing consensus in the literature (e.g., Burgess and Connell 2008; Clark 2005; Drobnič et al. 2010; Holman 2013; Kalleberg and Vaisey 2005) because of the inaccuracy derived from attempting to capture the complexity of the job-quality concept by means of a single characteristic (Schokkaert et al. 2009; Smith et al. 2008).

The JQCI proposed in this article is measured at the individual level, where several different indicators should be developed for individuals with different characteristics. People can perceive job quality differently not only because their working conditions differ but also because their personal motivations, professional aspirations or cultural norms differ (Foley and Schwartz 2003; Burgess and Connell 2008; Cooke et al. 2013).

This article makes two primary contributions: First, it contributes to the job-quality literature by analyzing a segment of the labor market (so-called Millennials or Generation Y) that is characterized by increasing employment insecurity, high labor mobility, and impoverished working conditions (Schmitt 2008). In this way, this study responds to the call for attention to be given to Generation Y and its members' work experience (Deal et al. 2010). Second, the article proposes a validated measure of job quality for young graduates that can be used to predict young workers' organizational behaviors (e.g., turnover intentions), so it has significant implications for human resource management (Ng et al. 2010). In addition, the article may inform policy interventions by suggesting what kinds of people have access to high-quality jobs and what kinds of companies offer them. More generally, the article answers the call for contributions in three key areas of job quality: its dimensions, influencing factors, and outcomes (Findlay et al. 2013).

The remainder of the paper is laid out as follows: First, we discuss relevant issues in defining and measuring job quality. Then we illustrate the dimensions of job quality for young graduates. Next, we present the data collection and the methodology used to construct the JQCI. Finally, the results and a discussion of their implications are offered.

## 2 Defining Job Quality

Job quality has been a recurrent topic in economic and social analyses, even though there is no consensus concerning what defines job quality (Findlay et al. 2013). The lack of a shared conceptualization is not due to a paucity of studies (see Muñoz de Bustillo et al. (2011) for a review) but to the fact that the definition of job quality at the individual level is basically subjective and related to occupation, location, and industry (Burgess and Connell

2008). Further, the value that individuals place on job attributes is determined by factors like their economic background, social environment, and personal and professional expectations (Cooke et al. 2013; Kalleberg 1977; Rosenthal 1989). Individuals' evaluations of job quality also evolve over time, as an individual's work experience at any one time determines his or her expectations about future work activities and affect his or her work-related behaviors, such as decisions to leave the organization, increase the level of effort, or ask for a promotion. This process of adjustment between the individual and the organization is dynamic in nature, and its success can be evaluated by outcomes such as job turnover (Clark 2001; Dupré and Day 2007; Mitchell et al. 2001) and job engagement (James et al. 2011).

Therefore, drawing on the extant literature (Clark 2005; Green 2006; Holman 2013; Muñoz de Bustillo et al. 2011), we define job quality as the set of work- and employment-related factors that have a positive and direct effect on the worker's well-being.

## 2.1 Job Quality: Measurement Issues

How job quality is measured varies considerably across studies. Some studies have measured job quality with a single variable, either objective, such as salary (Kalleberg et al. 2000; Loveman and Tilly 1988), or subjective, such as job satisfaction (Nagy 2002; Skalli et al. 2008), while others have considered several constitutive dimensions, using a multi-faceted approach (Erhel and Guergoat-Larivière 2010). Concerning *how* the characteristics of job quality are measured, studies have adopted objective job attributes (e.g., McGovern et al. 2004), subjective job perceptions (e.g., Foley and Schwartz 2003), and mixes of the two (e.g., Muñoz de Bustillo et al. 2011).

The multi-faceted approach requires researchers to consider two additional issues: the identification and grouping of the relevant characteristics of job quality into higher-order dimensions, and the importance of each characteristic and each dimension to the general job-quality score. The literature has adopted two strategies for dealing with the first issue. The data-driven strategy extracts the relevant dimensions of job quality through data-reduction techniques like factor analysis, cluster analysis, and fuzzy-set qualitative comparative analysis and applies them to large sets of job characteristics (James et al. 2011; Kalleberg and Vaisey 2005), while the theory-driven strategy defines the characteristics and dimensions of job quality by drawing them from the literature (Handel 2005). Both strategies are conditioned on the researcher's choices about the relevant job characteristics to include in the analysis. To address the second relevant issue, related to the weights for the various characteristics and/or dimensions, researchers may consider Decancq and Lugo's (2013) three classes of approaches: data-driven, normative, and hybrid. Data-driven weights such as those that are based on frequencies or statistical analyses are a function of how the dimensions analyzed are distributed and are not explicitly based on any value judgment. Normative weights, on the other hand, are set from value judgments (e.g., expert opinions), while hybrid weights are both data-driven and based on some form of evaluation.

## 3 The Dimensions of Young Graduates' Job Quality

### 3.1 The Issue of Generation Y's Job Quality

The literature has largely neglected the issue of job quality of younger highly educated workers, perhaps because of the assumption that this segment of the labor market has better

occupational opportunities compared to those of other segments (e.g., older, less-educated workers) (Kalleberg et al. 2000). However, unlike workers of a decade ago, the new generation of workers, the so-called Y Generation—particularly the skilled ones, is facing rapid impoverishment of their working conditions (Okay-Somerville and Scholarios 2013). For instance, in studying the dynamics of good and bad jobs in the American labor market for 1979–2005, Schmitt (2008) found that the likelihood that younger workers (age 18–34) would have access to good jobs has declined over time.

These young workers have work-related values, attitudes, and behaviors that differ from those of older, less educated workers (Terjesen et al. 2007; Ng et al. 2010; Twenge 2010), so what a young, well-educated worker might characterize as a good job may be substantially different from the job an older, less educated worker would so identify, not only because of generational issues but also because of the changed working, social, and economic conditions. These differences are particularly relevant for the management of such individuals at work. As Ng et al. (2010, p. 288) suggested, young graduates have an “ambitious and impatient nature” and elevated expectations for rapid promotions and pay increases. As a consequence, the ability to offer them high-quality jobs is a powerful attraction and retention strategy, especially in a tight economy, where companies have to compete for young talent while also having to reduce their labor costs (Dychtwald et al. 2013). As the literature has extensively demonstrated, poor job quality is a powerful determinant of workers’ intention to quit (e.g., Dupré and Day 2007; McPhail and Fisher 2008) and to change their jobs (e.g., Clark 2001; Rose 2003), even if in the case of Generation Y workers this relationship is still debated (Costanza et al. 2012; Deal et al. 2010).

Drawing on the literature in labor economics, human resource management, and work psychology, we identified a set of characteristics that are relevant to defining young graduate workers’ job quality. In particular, we considered both objective job attributes and subjective perception in order to balance the bias related to individual judgments (Schockaert et al. 2009) and to consider the specific perceptions and conditions of the group of workers (young graduates) we analyzed. According to Findlay et al. (2013, p. 448), job quality is “very much a contextual phenomenon, differing among persons, occupations and labour market segments, societies and historical periods.”

### 3.2 Job Quality Dimensions

The literature has not reached a consensus on the relevant aspects of job quality. Some authors have proposed lists of employment-related characteristics (e.g., Jencks et al. 1988; Kalleberg and Vaisey 2005; Muñoz de Bustillo and Fernández-Macías 2005; Ritter and Anker 2002) in which pay, autonomy, job security, promotion opportunities and working hours are frequently included. Such lists include a variable number of elements, from 2 to more than 10. Others have grouped such characteristics into a few broad dimensions (e.g., Handel 2005; Mitlacher 2008; Rubery and Grimshaw 2001), such as rewards and compensation, working conditions and nature of the work, interpersonal relationships, and professional prospects (Table 1).

Drawing from the extant literature (theory-driven strategy), we group job quality characteristics into three dimensions—economic, professional, and work–life balance—which not only represent recurrent themes in the job-quality literature but also reflect major issues in assessing young graduates’ employment conditions (Dychtwald et al. 2013; Okay-Somerville and Scholarios 2013).

**Table 1** Job quality characteristics and dimensions: a summary of the relevant literature

Bibliographic references	
Articles which do not aggregate job characteristics into dimensions	
Job quality characteristics	
Pay	Clark (2001, 2005), Foley and Schwartz (2003), Jencks et al. (1988), Kalleberg and Vaisey (2005), Muñoz de Bustillo and Fernández-Macías (2005), McGovern et al. (2004), Okay-Somerville and Scholarios (2013), Ritter and Anker (2002), Schokkaert et al. (2009), Sengupta et al. (2009), Weinkopf (2009)
Autonomy	Barling et al. (2003), Clark (2001, 2005), Kalleberg and Vaisey (2005), Jencks et al. (1988), Kelliher and Anderson (2008), Okay-Somerville and Scholarios (2013), Ritter and Anker (2002), Schokkaert et al. (2009), Sengupta et al. (2009), Weinkopf (2009)
Job security	Clark (2001, 2005), Foley and Schwartz (2003), Jencks et al. (1988), Kalleberg and Vaisey (2005), Muñoz de Bustillo and Fernández-Macías (2005), McPhail and Fisher (2008), Okay-Somerville and Scholarios (2013), Sengupta et al. (2009)
Promotion opportunities	Clark (2001, 2005), Kalleberg and Vaisey (2005), Kelliher and Anderson (2008), McGovern et al. (2004), McPhail and Fisher (2008), Ritter and Anker (2002)
Hours worked	Clark (2001, 2005), Jencks et al. (1988), Ritter and Anker (2002)
Benefit	Jencks et al. (1988), Kalleberg and Vaisey (2005), Ritter and Anker (2002)
Training	Barling et al. (2003), Jencks et al. (1988), McPhail and Fisher (2008)
Opportunity for skill use	Jencks et al. (1988), Okay-Somerville and Scholarios (2013), Wilson et al. (2008)
Work pressure	Jencks et al. (1988), Schokkaert et al. (2009), Sengupta et al. (2009)
Task variety	Barling et al. (2003), Schokkaert et al. (2009)
Team work	Muñoz de Bustillo and Fernández-Macías (2005), Sengupta et al. (2009)
Work itself	Clark (2001, 2005)
Skill upgrading	Ritter and Anker (2002), Wilson et al. (2008)
Relations with management	Clark (2001)
Allows to help other people	Clark (2005)
Useful to society	Clark (2005)
Work stimulation	Dupré and Day (2007)
Work clarity	Dupré and Day (2007)

Table 1 continued

	Bibliographic references
Work–life balance	Kelliher and Anderson (2008)
Gets dirty at work	Jencks et al. (1988)
Physically demanding work	Schokkaert et al. (2009)
Articles which aggregate job characteristics into dimensions	
Job quality dimensions	
Material rewards ( <i>pay, job security, promotion opportunities</i> )	Handel (2005)
Intrinsic rewards ( <i>interesting job, job autonomy</i> )	
Working conditions ( <i>stress, work load, physical effort, danger</i> )	
Interpersonal relations ( <i>management-employee relations, coworker relations</i> )	
Work organization	Holman (2013)
Wage and payment system	
Skill development	
Security and flexibility	
Engagement and representation	
Well-being	
Nature of work ( <i>integration, trust and identification, social relations, health and safety issues</i> )	Mitlacher (2008)
Job prospects ( <i>personnel development, job security, job duration</i> )	
Compensation and benefit ( <i>pay differentials, fringe benefits, additional rewards</i> )	
Employment relations and protection ( <i>employment opportunities, career opportunities, job protection, pay</i> )	Rubery and Grimshaw (2001)
Time and work autonomy ( <i>work intensity, power and autonomy, work–life balance, work relations</i> )	
Skills and careers ( <i>skills, job prospects</i> )	

### 3.2.1 *The Economic Dimension*

The economic dimension of job quality concerns the economic exchange between the worker and the employer (i.e., wages, benefits, contractual arrangement). There is broad consensus that wages are a fundamental aspect of job quality. From an organizational point of view, higher wages signal higher-valued jobs (Acemoglu 2001), and from the worker's point of view, a higher salary increases purchasing power and, consequently, satisfies a broader range of individual needs (Green 2006). Studies focused on young individuals have suggested that salary is a powerful factor in attracting and retaining Generation Y workers (Ng et al. 2010).

Another relevant area of the economic dimension relates to contractual stability. Statistics on employment show that younger individuals enjoy less stability than their older counterparts do; according to OECD data for 2012, about 26 % of workers between 15 and 24 years old have a temporary contract, compared with 8.8 % of workers between 55 and 64. Such instability increases the perception of job insecurity, affecting employees' well-being (Sparks et al. 2001) and perception of job quality (Mitlacher 2008; Wilson et al. 2008) negatively. Even if a certain amount of short-term job insecurity, including that which comes from self-employment, is accepted by young people who are "building" their careers (Böckerman 2004), long-term insecurity seems undesirable because it affects many aspects of life (e.g., the ability to buy a house, start a family, form a long-term relationship) (Smithson and Lewis 2000).

### 3.2.2 *The Professional Dimension*

The professional dimension of job quality concerns all of the job characteristics that result from the human resource management practices that influence the working conditions and the workers' accumulation of human capital. The aspects of the professional dimension we consider refer to practices like career advancement opportunities, training and development, and organization of work (i.e., level of responsibility and teamwork).

Having opportunities for advancement is a desirable aspect of a job because promotions can lead to increased earnings and other job desirable attributes (e.g., status, responsibility, organizational power), which affect the intention to leave (Kelliher and Anderson 2008; McPhail and Fisher 2008). James et al. (2011) found that workers classified as "settling-in adults" (age 25–39) perceive having promotion opportunities and possibilities for career development as extremely important in evaluating the quality of their job.

A second component of the professional dimension that is particularly relevant to an analysis of young graduates' job quality (Okay-Somerville and Scholarios 2013) relates to the mismatch between the human capital that individuals accumulate during their education and what is required of the job. Such a mismatch may take either or both of two forms: educational mismatch and skill mismatch (Allen and van der Velden 2001). An educational mismatch occurs when people's qualifications and their jobs' requirements do not match, such as when a worker must work below or above his or her level of education (i.e., a vertical mismatch). An educational mismatch may also occur when the worker has a degree from a field that differs from that the job requires (i.e., a horizontal mismatch). Studies have demonstrated that both of these forms of educational mismatch decrease job satisfaction (Verhaest and Omev 2006) and increase turnover (Battu et al. 1999). Hartog (2000) suggested that an educational mismatch might be a temporary situation related to the job search, but other studies have demonstrated a negative long-term effect on workers' earnings (Dolton and Silles 2008; McGuinness and Wooden 2006). A skill mismatch

relates to the extent to which a workers uses his or her experience, skills, and abilities to do the job. Like the educational mismatch, the skill mismatch has been shown to be associated with a low perception of job quality and with wage penalties (Green and Zhu 2010; Vieira 2005).

The level of responsibility assigned to the worker has also been studied as influencing job quality (e.g., Handel 2005; Jencks et al. 1988; Rubery and Grimshaw 2001). Both mature workers and younger workers consider opportunities for exercising initiative and autonomy and for coordinating and controlling other people important to a “good job” (De Hauw and De Vos 2010; Loughlin and Barling 2001).

Finally, workers may not consider working as part of a team positive or negative in absolute terms (Rosenthal 1989), but they may have strong feelings about its effect on job quality. From a psychological point of view, team members can provide companionship, social support, and emotional assistance, which can help workers to cope with challenging tasks and interpersonal demands (Koopmans et al. 2006). However, even cohesive teams may be affected by conflicts that damage interpersonal relationships and affect group performance (De Dreu and Weingart 2003). Young workers can also benefit from being part of a team in professional terms because they have the opportunity to perform a variety of jobs and to learn from co-workers (Siebert et al. 2009).

### 3.2.3 *The Work–Life Balance Dimension*

The work–life balance dimension of job quality involves aspects of the job that affect the balance between individuals’ work life and personal life, such as commuting time and working hours. The relationship between work and non-work may be even more important to young employees than it is to other groups of workers because of their desire to develop and manage their careers on their own terms (Cennamo and Gardner 2008; Loughlin and Barling, 2001).

A long commuting time, which affects the availability of leisure time, reduces young workers’ perception of job quality (Sturges and Guest 2004); this is particularly the case for female workers because of their household responsibilities (Haley-Lock et al. 2013). The problem of commuting time is exacerbated by longer working hours. Even if people with fewer working hours are less likely to have jobs that feature complex tasks and problem-solving (Smith et al. 2008), workers who have excessive work hours can suffer from stress and problems in managing their work–life balance. This issue appears to be particularly relevant among new generations; for instance, Clark (2005) demonstrated that workers’ preferences regarding working hours in seven OECD countries fell significantly between 1989 and 1997.

## 4 Data and Method

The study was conducted on a sample of graduates of the University of Padova, which, with 60,000 students enrolled and 11,000 graduates every year, is one of Italy’s largest universities. Padova is located in the northeast Italy, a geographical region whose economic system, unlike that of the rest of Italy, is affected by the presence of “local production systems”, areas with high concentrations of small and medium-sized firms in manufacturing and service activities (Burroni and Trigilia 2001). Local production systems are characterized by high levels of innovation, foreign direct investment, and a strong relationship with universities and research centers (Rodríguez-Pose and Refolo 2003).



Comparable areas also exist in Germany, France, and Great Britain (Crouch et al. 2001). For these reasons, the geographical area where Padova is located differs economically from the rest of Italy but is similar to other European regions.

The economic context in which the University of Padova operates is relevant because it affects the labor market conditions by increasing employment opportunities. Based on the data of the Italian National Statistical Institute for the 2011 (the year when the survey presented in this article was done), the employment rate in northeast Italy was higher (66.3 %) than that of any other Italian zone (northwest 64.5 %, center 61.1 %, south 44 %). In the same year the employment rate of University of Padova graduates was 89.5 %, which is similar to those of other universities in the same regional area (e.g., Verona 91.1 %, Trento 89.2 %, Venice 89.5 %, Trieste 89.5 %) and significantly higher than those of other Italian universities (e.g., Molise 74.2 %, Bari 75.8 %, Napoli "Seconda Università" 78.3 %, Cagliari 83.4 %, Roma "La Sapienza" 84.8 %) ([www.almalaurea.it](http://www.almalaurea.it)).

#### 4.1 The Survey

The data used for the present study are part of a larger longitudinal study called the Agorà survey, which examined the career outcomes of 2007 and 2008 graduates (Fabbris 2010) of all of the University of Padova's schools except of the school of medicine. A representative sample of graduates was interviewed 6, 12, and 36 months after graduation using a computer-assisted telephone interview technique (CATI). The response rate was 94.3 % 6 months after graduation, 91.4 % after 12 months, and 83 % after 36 months (Table 2).

Only graduates who answered the survey and were employed 36 months after graduation were included in the analyses ( $n = 2,436$ ). They were asked to provide a wide range of information about their current jobs (e.g., duties and tasks, working hours, salary, characteristics of the firm), the search activities they performed to obtain their jobs, any skill or educational mismatches, and a general assessment of their academic and professional careers. The survey also contained information about the respondents' demographic and educational backgrounds and work experiences (Table 3). Most of the graduates worked in the private sector (79.9 %), and nearly a third worked in small companies (33.2 %). More than a third (38.1 %) worked before graduating, and nearly a quarter (23.9 %) held at the time of the survey the same jobs they had when they were students.

All the analyses were performed using SAS9.3© software.

**Table 2** Sample size and response rate at every wave of the survey

	Initial sample size	Enrolled again <sup>a</sup>	Actual sample size	Non respondents	Interviewed	Response rate (%) <sup>b</sup>	Employed
6 months	4,769	802	3,967	225	3,742	94.3	2,443 (65.3 %)
1 year	3,742	274	3,468	299	3,169	91.4	2,426 (76.6 %)
3 years	3,443	151	3,292	558	2,734	83.0	2,436 (89.1 %)

<sup>a</sup> People excluded from the initial sample because, after the graduation, they enrolled again into a University course longer than 1 year

<sup>b</sup> Interviewed/actual sample size

**Table 3** Characteristics of the employed graduates interviewed 3 years after graduation (n = 2,436)

	%
Personal characteristics	
Gender	
Male	44.8
Female	55.2
Age	
≤24	21.8
25	28.9
26	21.3
≥27	28.0
Academic background	
University degree level	
Bachelor's degree (3 years)	40.8
Master's degree (2 years)	52.4
Five-year master's degree <sup>a</sup>	6.8
Disciplinary field	
Humanities (literature, philosophy, psychology, education)	31.3
Life sciences (pharmacy, veterinary medicine)	17.0
Socio-economic (economics, law, political science, statistics)	20.7
Technical-scientific (engineering, science, agriculture)	31.0
Work while studying	
Not working during university	61.9
Working during university: now hold the same job	23.9
Working during university: now hold a different job	14.2
Job characteristics	
Industry	
Agriculture	2.8
Manufacturing	24.0
Service	73.2
Sector	
Private sector	79.9
Public sector	20.1
Company size	
≤9	33.2
10–19	16.0
20–49	17.1
50–249	19.2
≥250	14.5

<sup>a</sup> Five-year tertiary education program directed at obtaining a master's degree

#### 4.2 The JQCI Structure

The structure of the JQCI is hierarchical: the multi-faceted concept of job quality is comprised of several dimensions, each of which is composed of several job characteristics

(called elementary indicators) that can be measured directly. In particular, the JQCI is the linear combination of three dimensions—economic, professional, and work–life balance—such that:

$$\text{JQCI} = w_{\text{econ}} \times \text{Dim}_{\text{econ}} + w_{\text{prof}} \times \text{Dim}_{\text{prof}} + w_{\text{WLbal}} \times \text{Dim}_{\text{WLbal}}.$$

The JQCI is a weighted mean of dimensions, and each dimension is a weighted mean of elementary indicators, so sufficiently high values in some dimensions can compensate for poor performance in others. The mainstream economic approach to job quality defends the existence of compensating differentials in the labor market, as workers with the same skills will be offered differing combinations of wages and working conditions, leading to the same job quality. Workers choose whatever combination best suits their preferences, such as working in a location farther away from home in exchange for a better wage or accepting a lower wage in exchange for an interesting and professional job (Muñoz de Bustillo et al. 2011). Given this approach, compensability is admissible.

A set of variables that are considered relevant to the analyzed sample (young graduate workers) measures each job-quality dimension.

Table 4 describes the elementary indicators.

#### 4.3 Weighting Procedure

In order to weigh the job-quality dimensions, we adopted a hybrid approach (Decancq and Lugo 2013) that considers information about value judgments as well as data. We considered such approach the better choice for the indicator proposed in this article, compared with data-driven and normative approaches, because young graduates experience the job first-hand and have all the information and knowledge required to assess the quality of their jobs.

Among the hybrid approaches we chose the stated-preference approach, which derives weights from the opinions of a representative group of individuals. The individuals we consulted in order to compute the weights were a representative sample of graduates from the same cohorts of the Agorà survey but who were not included in the survey. The new survey, carried out during the period between July and October 2010, investigated issues related to job satisfaction, work–life balance, and work expectations. The sample consisted of 380 employed graduates, all of whom were interviewed using a CATI technique. The respondents were required to answer the following open question: “What are the aspects of the job that you are doing that matter most in defining your level of satisfaction with the job? Please indicate a minimum of three to a maximum of five such aspects, in your own words.” The question was left open in order to avoid influencing the respondents and to increase variety in the answers.

The two authors of this paper read the answers to the open question and assigned each answer to one of the three dimensions of job quality. Not all answers were ascribable to one of the three dimensions of job quality, as sometimes respondents described aspects of their jobs that were related to work-specific or firm-specific situations (e.g., teachers who said that they are satisfied by working with children, or individuals who are satisfied because they work for a company with a good reputation). We did not consider such answers in computing the weights for the job-quality dimensions.

The weights were calculated as the proportion of responses assigned to a dimension compared with the total number of responses allocated to the three dimensions.

**Table 4** Dimensions and elementary indicators composing the IQCI

Dimension	Elementary indicator	Question	Computation and values	Weight within the dimension
Economic	Hourly wage <sup>a</sup>		Monthly net salary/monthly working hours	1/2
	Employment relationship		1 = employee 0 = self-employed	1/4
	Contract duration		1 = permanent contract 0 = fixed-term contract	1/4
	Professional educational match <sup>b</sup>	Level of coherence between the respondent's field of education and the job (on a scale between 1—minimum to 10—maximum)	0 (from 1 to 5) = low match 1 (from 6 to 10) = high match	1/6
Professional	Vertical educational match	A university degree is required for the job	1 = yes 0 = no (i.e., lower education required for the job)	1/6
	Skill match	In doing the job, the skills learned at university are utilized	1 = yes 0 = no	1/6
	Career advancement opportunities	Career advancement opportunities in the next 2 years	1 = yes 0 = no	1/6
	Teamwork	The job requires working in a team with other colleagues	1 = yes 0 = no	1/6
Work-life balance	Responsibility level	The job requires coordinating and controlling other people	1 = yes 0 = no	1/6
	Working hours		1—(weekly working hours normalized between 0 and 1)	1/2
	Home-work distance	The worker lives in the same geographical area (province) where s/he works	1 = yes 0 = no	1/2

All indicators have been normalized between 0 and 1, subtracting the minimum and then dividing by the range

<sup>a</sup> Values <3rd and >97th percentile have been assigned to 3rd and 97th percentile, respectively

<sup>b</sup> The variable has been dichotomized in order to have the same scale as the other elementary indicators

### 4.3.1 Weights Validation

We validated our weights by comparing them with those obtained with another weighing approach. In doing this, we adopted another hybrid approach (hedonic approach) based on the implicit opinions of the 380 graduates in our supplementary survey. Weights were obtained by regressing a measure of overall satisfaction on a set of variables representing the three dimensions of the concept (Decancq and Lugo 2013). We asked respondents to express their level of job satisfaction (using a 1–10 ranking) for the job as a whole and with reference to a set of specific job characteristics. The job characteristics listed in the question were ascribed to the three job quality dimensions of the JQCI: the economic dimension referred to the level of satisfaction with contractual stability and wages; the professional dimension referred to satisfaction with the opportunity for professional development and career prospects, and the work–life balance dimension referred to satisfaction with working time flexibility and with the distance between home and workplace. The weights are the regression coefficients obtained via an ordinal logistic regression model, where the dependent variable is the level of overall job satisfaction and the explanatory variables are the level of satisfaction with the individual job attributes. In order to obtain the weights for each dimension, we calculated the arithmetic mean of the standardized regression coefficients of the job attributes included in each dimension, rescaled to sum to one.

## 4.4 Validation of the JQCI

The JQCI was validated for both content validity and stability. The content validity tests to see whether the dimensions of the JQCI actually measure the job quality aspects for which they were constructed (i.e., economic, professional, and work–life balance). Drawing on the literature on job quality, we can safely state that low job quality is a reason to quit the job. Therefore, we asked to respondents, to indicate the main reason that would lead them to leave their jobs:

*Have you ever thought of leaving your job? If yes, please indicate the main reason.*

1. I have never thought about leaving my job.
2. I would leave to improve my compensation and the contractual arrangement.
3. I would leave to improve the work content and to have more opportunities to use my skills.
4. I would leave to work closer to home.
5. Another reason.

We associated some of the answers from those who had thought about leaving their jobs to the job quality dimensions: in particular, the second answer corresponds to the economic dimension, the third answer to the professional dimension, and the fourth answer to the work–life balance dimension. The rationale for this validation procedure was that people who have thought of leaving their jobs for a specific reason (e.g., to improve their compensation) are likely to have a low score on the corresponding dimension of the JQCI.

Starting from the answers to the question presented above, we calculated three dichotomous (dependent) variables, each of which is associated with one dimension of the JQCI: economic reasons to leave the job (1 = yes, 0 = no), professional reasons to leave the job (1 = yes, 0 = no), work–life balance reasons to leave the job (1 = yes, 0 = no). We performed a logistic regression for each dichotomous variable using as explanatory variables the scores on the three dimensions of the JQCI. We verified the content validity

if, for instance, in the regression where the dependent variable is the dummy “Economic reasons to leave the job,” only the economic dimension (as the explanatory variable) is statistically significant with a negative coefficient; that is, individuals consider leaving their jobs for economic reasons because the economic dimension of their job quality is low.

We tested stability by splitting the sample first into two and then into three random subsamples of equal size. We repeated the procedure fifty times for each subsample and calculated the mean of the JQCI and that of its dimensions for each sample. Using the Wilcoxon signed-rank test (two subsamples) and the Kruskal–Wallis test (three subsamples), we verified how many times the mean of the JQCI and of its dimensions differed significantly among subsamples; the less often the means differ, the higher the stability of the indicator and of its dimensions. An error rate below 5 % is considered acceptable, at least in the case of two subsamples.

#### 4.5 Use of the JQCI

There are two reasons for designing and calculating a JQCI for young graduates: to offer an informative basis for policy-making purposes and to predict employees’ organizational behaviors.

To offer an informative basis for policy-making, we conducted a descriptive analysis of the level of JQCI and its dimensions and performed a second descriptive analysis that considered the mean score for the JQCI and its dimensions according to organizational and graduates’ characteristics. Then we conducted a multivariate analysis in order to identify the determinants of job quality using a stepwise linear regression with logit (JQCI) as the dependent variable. The dependent variable ranges between minus and plus infinity and is normally distributed, as verified by normality tests. The descriptive and the multivariate analyses identify the groups of graduates who experience the best/worst job quality. Through these analyses the characteristics of the firms that offer high-quality jobs are identified.

To predict employees’ organizational behavior, we draw on the literature on job quality and Generation Y. Graduate workers’ turnover intention has been considered a relevant outcome for testing the predictive capacity of the JQCI at the organizational level (e.g., Dychtward et al. 2013). We used the “In the last 12 months, have you searched for a new job, even if you were already employed?” to measure the intention to leave a job. Along with the JQCI, we considered other individual (gender, age, university degree level, disciplinary field, work experience while studying) and organizational (industry, sector, company size) variables as predictors. Because the intention to leave is a dichotomous dependent variable (1 = yes, 0 = no), we adopted a log-binomial regression that belongs to the Generalized Linear Models family and that is characterized by a logarithmic link function and a binomial distribution. The log-binomial regression allows the relative risk to be estimated as a function of more explanatory variables.<sup>1</sup> We selected explanatory variables using a stepwise technique.

<sup>1</sup> We did not adopt the more popular logistic regression model because it estimates odds ratios in order to approximate the relative risk of rare events. Since 17 % of the respondents in our sample planned to search for a new job, we cannot consider the event to be rare.

## 5 Results

### 5.1 The Job Quality Composite Indicator

#### 5.1.1 The JQCI Dimensions

According to the descriptive analysis of the JQCI (Table 5), the professional dimension has the highest mean score (mean = 0.626), followed by the work–life balance dimension (mean = 0.573). The economic dimension has the lowest mean score (mean = 0.497), suggesting that wage and contractual conditions are a critical aspect in assessing the quality of young graduates' jobs. Three years after graduation, less than half (46.5 %) of the respondents had permanent employment, and their median wage was 1,175 euros, with the large majority (95 %) paid <2,000 euros.

These results are in line with a widespread trend toward impoverishment of economic and contractual working conditions: according to the most recent OECD data (Education at a Glance 2013), the earning premium for education in Italy (tertiary education compared with upper-secondary education) is 20 % points for people between 25 and 34 years old and 83 % points for people between 55 and 64 years old, and this premium has constantly decreased over the last decade. However, in order to analyze these data correctly, we must consider that the graduates who were surveyed entered the labor market at the beginning of the 2007 international economic crisis and developed their careers in a declining economy. (According to OECD data, the Italian gross domestic product has been negative in three of the last 5 years, and the youth unemployment ratio increased in the same period from 21.3 to 35.3 %).

#### 5.1.2 Weights

The weight of the professional dimension of the JQCI is the highest (0.637) of the three dimensions, followed by the economic (0.242) and work–life balance (0.121) dimensions (Table 5, last column). Considering that only 23 % of the respondents have their own families (and only 7 % have children), it is reasonable that the work–life balance dimension would be the least relevant to the sample as a whole.

We validated the weights by comparing them with a new set of weights computed using the hedonic approach. The values for the three dimensions (0.604 for the professional dimension, 0.204 for the economic dimension, and 0.192 for the work–life balance dimension) are similar to those obtained using the stated preference approach.

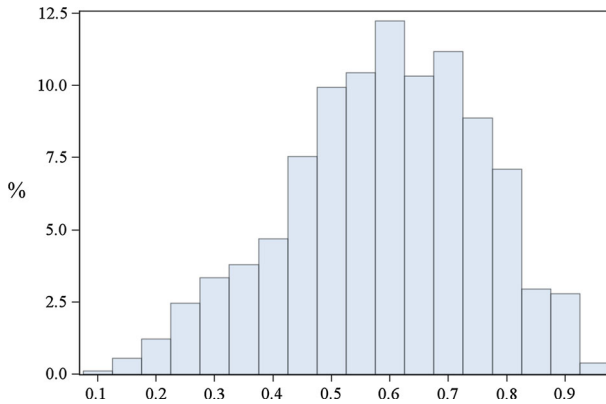
#### 5.1.3 The JQCI

The distribution of the JQCI is presented in Fig. 1. The indicator ranges from 0.09 to 0.96, covering almost the entire interval [0–1]. The distribution is smooth and slightly skewed toward the higher values: the mean is 0.589 (standard deviation = 0.165) and the median is 0.595 (IQ range = 0.233).

The slight skewedness of the distribution toward the highest values is related to the fact that the professional dimension scored the highest and had the highest weight.

**Table 5** Descriptive statistics of JQCI and its dimensions

	Mean	SD	Median	IQ range	Min.	Max.	Weights
JQCI	0.589	0.165	0.595	0.233	0.092	0.960	
Economic dim.	0.497	0.239	0.567	0.344	0	1	0.242
Professional dim.	0.626	0.230	0.667	0.333	0	1	0.637
W–L balance dim.	0.573	0.269	0.667	0.383	0	1	0.121

**Fig. 1** JQCI distribution

#### 5.1.4 JQCI Validation

Table 6 shows the results related to content validity. Each regression considers a different reason for leaving the job as the dependent variable and, as expected, only the dimension associated with the dependent variable has a significant and negative coefficient.

Concerning JQCI stability, none of the 50 trials based on two sub-samples shows statistically significant differences between the JQCI means. The test with three sub-samples shows that, in four cases, the means of the JQCI differ significantly (error rate = 8 %).

As for the stability of the JQCI dimensions, the test with two sub-samples presents only one case of significant difference between the means of the dimensions (error rate = 2 %). When we split the sample into three sub-samples, the means of the professional dimension differ significantly in four cases (error rate = 8 %), the means of the economic dimension differ significantly in two cases (error rate = 4 %), and the means of the work–life balance dimension differ significantly in three cases (error rate = 6 %).

As a whole, the results of the validation suggest that the JQCI has good stability.

## 5.2 The Analysis of the JQCI for Policy-Making Purposes

The descriptive analyses of the JQCI and its dimensions (Table 7) reveal the characteristics of the individuals who get the best jobs and those of the companies that offer them.



**Table 6** JQCI validation through content validity: Logistic regression of the reasons to leave as a function of the three dimensions of the JQCI

	Estimate	SE	<i>p</i> value
Dependent variable. Reason to leave: economic (16 % of graduates)			
Intercept	-0.999	0.285	0.0005
Economic dimension	-1.092	0.295	0.0002
Professional dimension	-0.204	0.305	0.503
Work-life balance dimension	0.013	0.262	0.961
Dependent variable. Reason to leave: professional (12.5 % of graduates)			
Intercept	-0.837	0.313	0.007
Economic dimension	1.290	0.358	0.0003
Professional dimension	-2.807	0.335	<0.0001
Work-life balance dimension	-0.252	0.293	0.390
Dependent variable. Reason to leave: work-life balance (4.4 % of graduates)			
Intercept	-2.672	0.510	<0.0001
Economic dimension	1.175	0.559	0.036
Professional dimension	-0.377	0.550	0.493
Work-life balance dimension	-1.578	0.437	0.0003

The JQCI is significantly higher for males than for females (0.621 vs. 0.564,  $p < 0.0001$ ), and the economic and professional dimensions are higher for males, whereas the work-life balance dimension is higher for females.

The JQCI increases with age ( $p < 0.0001$ ), primarily because of the contribution of the economic dimension. Among the oldest graduates, 52.6 % worked while studying and have maintained the same job after graduation. In the regression (Table 8), the effect of age is captured by the variable related to work done while studying because people who did the same job before and after graduation are older, and it is captured by the level of the degree earned because master's degree graduates are older than bachelor's degree graduates.

The JQCI is the highest (0.636) for graduates who were employed before graduation and who held the same job after graduation.

The 5-year master's graduates have the highest JQCI (0.638). While they are just a small group in the sample (6.8 %), most (70 %) are adult students who had a stable job during university and maintained the same job after graduating. Consequently, there is an overlap with the effect related to work while studying. The JQCI comparison between bachelor's and master's degree graduates shows a significant difference (0.565 and 0.600, respectively,  $p < 0.0001$ ), and the professional dimension is significantly higher for masters' graduates (0.651 for master's graduates vs. 0.587 for bachelor's graduates), whereas the work-life balance dimension, which has a lower weight in the JQCI, is higher for bachelor's graduates (0.603 for bachelor's graduates vs. 0.541 for master's graduates).

Graduates from technical-scientific schools have the highest JQCI, thanks to the contribution of the professional dimension. Engineering students have the highest JQCI (0.668) and find the best jobs in terms of both the professional and the economic dimension (0.746 and 0.577, respectively). Graduates in socio-economic disciplines benefit from the best economic dimension, while the work-life dimension is the highest for graduates in the humanities. These results are confirmed by the multivariate analysis, which shows that obtaining a degree in the socio-economic or technical-scientific disciplines is a significant

**Table 7** JQCI and its dimensions: values by company and graduates' characteristics

	Mean	SD	$p^a$	Dimensions		
				Economic	Professional	W–L balance
Gender						
Male	0.621	0.159	<0.0001	0.532	0.675	0.513
Female	0.564	0.166		0.471	0.589	0.618
Age						
≤24	0.562	0.168	<0.0019	0.455	0.593	0.610
25–26	0.597	0.162		0.493	0.647	0.544
≥27	0.593	0.169		0.538	0.613	0.601
University degree level						
Bachelor's degree	0.565	0.171	<0.0001	0.489	0.587	0.603
Master's degree	0.600	0.163		0.496	0.651	0.541
Five-year master's degree <sup>b</sup>	0.638	0.129		0.555	0.667	0.652
Disciplinary field						
Humanities	0.551	0.167	<0.0001	0.461	0.562	0.674
Life sciences	0.597	0.149		0.494	0.642	0.567
Socio-economic	0.597	0.169		0.528	0.634	0.543
Technical-scientific	0.616	0.159		0.512	0.676	0.501
Work while studying <sup>c</sup>						
Not working	0.602	0.163	<0.0001	0.496	0.651	0.553
Same job after graduation	0.636	0.154		0.609	0.652	0.605
Different job after graduation	0.582	0.163		0.511	0.612	0.563
Company size						
≤9	0.545	0.164	<0.0001	0.401	0.585	0.625
10–19	0.588	0.160		0.474	0.626	0.614
20–49	0.587	0.153		0.511	0.611	0.615
50–249	0.614	0.169		0.564	0.647	0.543
≥250	0.632	0.165		0.587	0.685	0.439
Industry						
Agriculture	0.617	0.151	<0.0001	0.463	0.686	0.568
Manufacturing	0.619	0.167		0.541	0.670	0.505
Service	0.577	0.164		0.482	0.608	0.599
Sector						
Private sector	0.587	0.170	0.0002	0.492	0.630	0.554
Public sector	0.594	0.143		0.523	0.609	0.661

SD standard deviation

<sup>a</sup>  $p$ : significance of  $t$  test when comparing indicator mean between two groups (ex: males vs. females) and analysis of variance test when comparing three or more groups (ex: disciplinary area). Because the JQCI lies in [0–1],  $t$  test and ANOVA refer to  $\log [JQCI/(1 - JQCI)]$ , which is normally distributed

<sup>b</sup> Five-year tertiary education program directed to obtaining a master's degree. Excluding the five-year master's degree, the difference between bachelor's and master's degrees remains significant ( $p < 0.0001$ )

<sup>c</sup> 19 % of missing data

**Table 8** Significant explanatory variables of the JQCI, resulting from a stepwise linear regression

Variables	Estimate	SE	Significance
Intercept	0.9724	0.1187	<0.0001
Personal characteristics			
Gender (ref: male)			
Female	-0.1657	0.0441	0.0002
Academic background			
University degree level (ref: 5-year master's degree)			
Bachelor's degree	-0.6125	0.1032	<0.0001
Master's degree	-0.4456	0.1059	<0.0001
Disciplinary field (ref: humanities)			
Life sciences	-0.0226	0.1002	0.8213
Socio-economic	0.1423	0.0558	0.0109
Technical-scientific	0.1395	0.0534	0.0091
Work while studying (ref: Same job after the graduation)			
Different job	-0.2631	0.0632	<0.0001
Not working	-0.2211	0.0480	<0.0001
Job characteristics			
Company size (ref: ≤9)			
10–49	0.1499	0.0499	0.0027
≥50	0.3242	0.0498	<0.0001

Because the JQCI lies in [0–1], the dependent variable is  $\log [JQCI/(1 - JQCI)]$ , which is normally distributed. The stepwise selection consists of the recursive introduction and eventual removal of explanatory variables on the basis of their statistical significance

predictor of job quality (compared with graduates in humanities). Because the value of the JQCI for graduates in the life sciences group is influenced by the fact that 65 % of this group completed a 5-year master's degree, in the multivariate analysis the dummy related to life science is not statistically significant.

Both gender and discipline remain significant in the multivariate analysis. Despite a high association between gender and discipline (49.0 % of women were enrolled in liberal arts courses compared to 12.5 % of men, and 19.4 % of women were enrolled in sciences courses compared to 60.6 % of men), the lower quality of women's jobs cannot be attributed entirely to their disciplines, as women show a comparative disadvantage in job quality even when they are compared to men in the same discipline (Table 8).

Graduates with the highest-quality jobs tend to be employed by bigger companies, as the JQCI rises with the size of the firm ( $p < 0.0001$  ANOVA test): from 0.545 for the smallest companies ( $\leq 9$  employees) to 0.632 for the largest ones ( $\geq 250$  employees). The work–life balance dimension has an inverse trend, decreasing as the firm size increases (from 0.625 to 0.439). In the multivariate analysis, company size is the only firm-related characteristic that significantly predicts job quality.

The other characteristics of the firm that we considered were the industry and the sector. The manufacturing industry offers higher-quality jobs (JQCI = 0.619) than do the agriculture or services industries (0.617 and 0.577, respectively). The service sector is highly heterogeneous (from financial and business services to health, education, and public administrations), and it includes 73 % of the respondents.

Finally, the difference in the JQCI between the private and public sector is small (0.587 vs. 0.594), even if statistically significant because of the large size of the sample. This result is the effect of the balancing contributions of the three dimensions: whereas the professional dimension is highest in the private sector, the economic and work–life balance dimensions are most relevant in the public sector.

### 5.3 The JQCI as a Predictor of Employees' Organizational Behaviors

Among the respondents, 17.4 % had searched for a new job during the 12 months before the interview, even if they were already employed. In the stepwise log-binomial regression, which considers both JQCI and all variables presented in Table 7, the only significant explanatory variable is JQCI, for which the relative risk of “not being willing to change jobs” is estimated at 1.552 (95 % CI 1.378–1.748); that is, the intention not to change jobs increases by 55.2 % as the index value shifts from 0 to 1. A more reasonable increase in JQCI, such as 0.2, suggests a relative risk of 1.092 (1.066–1.118); that is, the intention not to change jobs would increase by 9.2 % as JQCI increases by 0.2 points.

That the JQCI is the only explanatory variable that significantly predicts the intention to change jobs suggests that JQCI, which is influenced by the features of both the person in the job and the job's working conditions, encompasses such features. Therefore, it is not necessary to take them into account in investigating the reasons that underlie the intention to leave a job.

## 6 Discussion and Conclusions

This study proposed a JQCI for young graduates. The proposed JQCI has three dimensions drawn from the literature on labor economics, human resource management, and work psychology. These dimensions are comprised of both objective and subjective elementary indicators that have been weighted through the stated preference approach. The chosen dimensions and the weighting procedure are not intended to be universal but to address a well-defined population with specific characteristics, as different groups of workers may require different dimensions and weights.

Our research findings are directed to firms that are interested in attracting and retaining Generation Y graduates and to policy-makers who are interested in the characteristics of young graduates who get high-quality jobs and the characteristics of the companies that offer them.

Our findings show that women are less likely than men to have a quality job. Literature on the relative deprivation of working women (Clark 1997; Crosby 1982; Major and Konar 1984; Sauser and York 1978) has demonstrated that women have lower professional expectations than men do, so they are as satisfied as men are even if they are paid less or employed in lower-quality jobs. On the other hand, studies on young individuals have shown that women perform better educationally than men do and that they have the same work expectations as men do (Argyle 2002; Ganzach 2003). Our findings suggest that young women graduates are employed in lower-quality jobs in terms of the jobs' professional and economic dimensions than men are. Our data do not suggest whether women willingly choose jobs that are superior in terms of the life-work balance dimension but that are inferior in terms of their professional and economic dimensions, or they are forced into this choice by the absence of alternatives.

Our findings confirm the advantages of science, technology, engineering, and mathematics (STEM) graduates in the labor market. European analyses (EU Skills Panorama 2012) have shown that the current supply of STEM graduates is insufficient to cover the growing demand, while our results suggest that firms are motivated to increase the quality of the jobs they offer in order to be more attractive to workers and cover the skill shortage. Similar trends characterize the American labor market, where STEM workers earn higher wages (+26 %) than their non-STEM counterparts do (Langdon et al. 2011).

Our findings also highlight the existence of a “job quality” premium for master’s graduates, which the economics literature on wage premiums related to tertiary education has neglected. Our research shows that job quality as a whole is significantly higher 3 years after graduation for people who attained master’s degrees compared with those who attained only bachelor’s graduates.

Graduates who were employed before graduation and who kept the same job after graduation have the highest JQCI. This subsample, which is significantly older than the other graduates (27.4 vs. 23 years old at graduation,  $p < 0.0001$ ), are defined as “adult” students (i.e., older than 25 years according to the UK and US education systems). Analysis of the three dimensions of the JQCI reveals that adult students’ obtaining a degree is not related to finding a job that has better professional content and that adult students benefit from better economic conditions because of their seniority in the labor market. Such findings are partially unexpected because one of the most commonly cited reasons for the participation of adult students in higher education is the desire for career improvement (Fuller 2001). Our results are open to several interpretations. First, as Wolfgang and Dowling (1981) suggested, adult students are motivated to pursue higher education in order to acquire knowledge and develop competence, and such intrinsic motivation is not necessarily related to the desire for career advancement. Second, as adult students often hold the same positions before and after graduation, they may have been temporarily employed in jobs for which a higher level of education was required, and after they attain the degree, they realize a better match between education and job. Third, the career premium of education for adult students might not have a short-term effect because of their organizations’ human resource management policies.

Finally, our findings show that bigger organizations offer the best jobs in terms of the economic and professional dimensions. Previous studies have reported conflicting findings concerning the relationship between firm size and job quality: Wagner (1997) affirmed that small firms offer worse jobs than large firms, while Storey et al. (2010) found that job quality is highest in small firms and decreases as firm size increases. Our results sustain a positive relationship between job quality and size, showing that larger firms are more likely than smaller firms to have formal human resource practices regarding wages, training activities, and promotion opportunities. Larger firms’ ability to pay is probably higher than that smaller firms, and they are more likely to be well known in the labor market and to have high value in the *curricula vitae* of young graduates as a consequence. Smaller firms may offer a better work–life balance, as indicated by the value of the social dimension.

As a whole, in terms of policy-making indications, the characteristics of the workers at a disadvantage in accessing high-quality jobs are similar to the descriptions already presented by the job-quality literature: women workers, less educated workers, and workers with degrees in the humanities. However, unlike previous analyses, this picture is of a highly skilled labor market segment. Therefore, our findings sustain the growing interest on the changing nature of the graduate labor market (James et al. 2013), where graduates are increasingly employed in jobs like personal services, protective services, and sales (Okay-Somerville and Scholarios 2013), which were once occupied by workers without degrees.

The second aim of our research was to identify the job characteristics that attract and retaining Generation Y graduates. Our findings suggest that such individuals are attracted to and retained in jobs that allow them to apply the knowledge and skills they learned at university and that offer career opportunities and professional development. These results have been confirmed by other research findings on Generation Y workers (Terjesen et al. 2007; James et al. 2011). The work–life balance dimension is not particularly relevant in determining young graduates’ perceptions of their jobs’ quality, as the individuals in our sample were more concerned with their professional development and the economic conditions of their job than with the opportunity to work close to home or have time to take care of their family. As Super (1980) suggested, young graduates are still in their “exploration” career stage and are less concerned with personal issues like establishing a family than they are with developing themselves as valuable workers. However, these results do not conform to the growing literature about downshifting (Drake 2009; Kennedy et al. 2013), which suggests that workers are progressively attracted by job opportunities where they are not forced to sacrifice their personal lives and interests to work requirements.

The economic dimension is the second-most valued aspect of the jobs young workers hold. As the structural perspective on career mobility (Forrier et al. 2009) suggests, individual agents are not completely “free” in making decisions about their career but are bounded by the institutional factors (e.g., labor legislation, employment rate, costs of mobility) that operate in the labor market. Therefore, young graduates’ attention to compensation and stability may be interpreted as a response to the increasing deregulation of the labor market and increasing economic uncertainty that has characterized the Italian economy in the last decade. As a consequence, even if non-standard contracts that often pay less than permanent ones are common among companies that hire younger workers, people perceive temporary employment not as a stepping-stone but as a potential career trap (Scherer 2004).

In summary, as a general indication for human resource managers who want to attract and retain Generation Y workers, particular attention must be paid to the design of these workers’ professional working conditions. The opportunity for skill development and career prospects and extrinsic rewards are important, and practices oriented to improve work–life balance are especially relevant for women.

## 6.1 Limitations and Further Research

This study has some limitations. First, we interviewed graduates 36 months after graduation, so respondents were still in the exploration stage of their careers, a stage characterized by frequent job changes. As Neal (1999) demonstrated, young workers may adopt a “two-stage” search strategy during their career, at first searching for a suitable job that matches their professional aspirations and then searching for the “right” employer. Therefore, the reliability of their responses concerning job quality may be related to the stage of their career, and their value may be short-lived as Generation Y workers age. Longitudinal research might reveal whether our findings will hold in the longer term for these workers.

Second, this study has not established the validity of applying the JQCI to other samples of graduates. Further research may compare Generation Y graduates with Generation X graduates or Baby Boom graduates in order to determine whether the characteristics of job quality are similar across generations. An international comparison could also be done in order to determine to what extent the job quality is related to the national context. As the

Easterlin paradox (1974) suggests, some facets included in the JQCI may be influenced by the availability of those characteristics in the context in which individuals operate: for instance, career advancement opportunities, which are generally associated with high-quality jobs, may be valued less if all workers can access them easily.

Third, given that the data used in calculating the JQCI come from the same source (i.e., the questionnaire to the graduates), a common method bias may affect the research. Even if it has been demonstrated (e.g., Doty and Glick 1998) that such limitation does not invalidate research findings in social studies, further research may adopt different sources of data (for instance, information from employers) in order to reduce such bias.

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