Effects of country & age on work engagement, job satisfaction & organizational commitment among employees in India

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THE SLOAN CENTER ON aging & work AT BOSTON COLLEGE

Effects of Country & Age

on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in India

Findings from the

Generations of Talent *Study*

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Key Findings & Employer Considerations

INTRODUCTION

The Generations of Talent Study gathered data from 11,298 individuals working at 24 different worksites in 11 countries. For this report, we used information about employees in all 11 of these countries.

As indicated by the table below, we identify the countries as belonging to one of two groups: those with older populations and developed economies and those with younger populations and developing economies.

"Old-Developed Countries"	"Young-Developing Countries"
Japan	Brazil
The Netherlands	China
Spain	India
United Kingdom	Mexico
United States	South Africa
	Botswana

AGE FACTORS

Among the respondents to the Generations of Talent Study:

A higher percentage of respondents working at sites in India are under the age of 30 (59.6%) compared to those working at sites in the "old-developed" countries (10.1%), such as Japan, the U.K., and the U.S. (see page 22).

- Employers with sites in India may want to consider whether their employees are similar to the sample participating in the Generations of Talent Study, or if the age composition of their workforce is different. Indeed, while over half (59.6%) of respondents in India reported being under the age of 30, an additional third (30.7%) reported being between the ages of 30-39, with an additional 7.3% being aged 40-49. If employers with sites in India have similar workforce composition, these employers may need to focus their attention on assessing talent management policies to provide more leadership and advancement opportunities for workers in under the age of 30 as well as workers aged 30-39.

Among those working at sites in India, a greater percentage report being early career employees (54.0%) than those working at sites in the "old-developed" countries (22.5%). Respondents from India in early career range from 18 to 82 years, while those who consider themselves as late career range from age 18 to 58 years (see page 23).

- Employers in India who find that they have relatively greater percentages of early career employees might want to re-assess attractiveness and effectiveness of employee benefits for these employees. However, it is important to acknowledge that people might bring career development needs regardless of their age. Given the broad age range of employees who report themselves being in early career (from 18 to 82 years), employers might consider the benefits of tailoring employee supports or programs to the needs of particular

age cohorts within the different career stage groups. For example, employers might want to determine the effectiveness of career development programs to ensure older early career employees acquire or maintain the skills and competencies necessary for maximal performance. In addition, employers might want to consider providing their younger early career employees with experiences that will prepare them for the leadership roles they are likely to assume in the context of India's multi-generational workforce.

A lower percentage of respondents working at sites in India report having child care responsibilities (16.6%), compared to those at sites in the "old-developed" countries (40.3%) as well as the other "young-developing" countries (30.5%) (see page 25).

- Employers might want to consider how work-life issues (generally) and dependent care responsibilities (more specifically) affect the performance of employees and the work of their teams. Employers with sites in India may find it beneficial to adopt policies that help employees fulfill their child care or elder care responsibilities by providing options such as schedule flexibility or reduced work hours, or other employee benefits that can either reduce work-family conflict or promote positive spillover from work to home.

WORK ENGAGEMENT

Among the respondents to the Generations of Talent Study:

The work engagement of respondents working in India does not significantly differ from the work engagement of respondents in the other "young-developing" countries, including Brazil and China, or the "old-developed" countries, including the U.S., the U.K. and Japan (see page 31).

Three-quarters (75.3%) of respondents working at sites in India very often to always "feel happy when they work intensely." In addition, 73.8% report that "time flies" when they are working very often to always, and 70.8% very often to always think that they are "immersed in their job." Half (52.0%) report that very often to always they "feel bursting with energy" at their work (see page 30).

Work engagement is high overall among respondents from worksites in India. However, work engagement does not significantly differ among respondents of different ages, career stages, or life stages (see page 31).

- Some employers in India may find that the drivers of engagement (such as satisfaction with training and development) have a positive impact on all employees. In these situations, the companies might decide to focus on universal strategies (such as the adoption of flexible work options, or providing more inclusive environments) that are important to employees across ages or career stages.

JOB SATISFACTION

Among the respondents to the Generations of Talent Study:

Job satisfaction among respondents at worksites in India does not significantly differ from the job satisfaction of respondents in the "old-developed" countries, such as Japan and the United States, or the other "young-developing" countries, such as Brazil and China (see page 34).

Among respondents working at sites in India, 88.3% are moderately to strongly satisfied with their relationships with their subordinates. By contrast, three-fourths (78.8%) are moderately to strongly satisfied with the relationships with their peer/co-workers, while fewer than three in five (57.9%) are moderately to strongly satisfied with relationships with their supervisors. Half (52.0%) report being moderately to strongly satisfied with opportunities for training and development. However, slightly more than one-third (37.1%) are moderately to strongly satisfied with benefits that promote health, wellness, and psychological wellbeing (see page 33).

While overall job satisfaction is high among respondents at worksites in India, job satisfaction does not significantly differ among respondents of different ages, career stages, or life stages (see page 34).

- In their effots to maintain high levels of job satisfaction, employers could assess whether specific resources or benefits, such as training opportunities or health and wellness programs, help explain variation in the levels job satisfaction for all employees, or for any particular sub-set of employees.

ORGANIZATIONAL COMMITMENT

Among the respondents to the Generations of Talent Study:

Organizational commitment among respondents at worksites in India does not significantly differ from the commitment of respondents in the other "young-developing" countries and the "old-developed" countries participating in the GOT study (see page 37).

Altogether, roughly four in five (83.7%) respondents at worksites in India moderately to strongly agree that they are "extremely glad to have chosen their organization over others they were considering at the time of joining." More than three-quarters (79.8% and 77.9%) moderately to strongly agree that they feel "proud to be working for their organization" and that they are "willing to work harder than they have to in order to help their organization succeed." However, just one-quarter (24.5%) moderately to strongly agree that they would "take almost any job to keep working for their organization" (see page 36).

Organizational commitment is higher for respondents in mid-career at worksites in India, compared to those in early career. However, organizational commitment among respondents at sites in India does not significantly differ for respondents of different ages or life stages (see page 37).

- It can be heartening for employers when employees report high levels of organizational commitment. The challenge, of course, is to discover ways to maintain positive employee attitudes in addition to raising commitment among certain employee populations. When employers find that levels of commitment vary by career stage, they might conduct focus groups for early, mid and then late career employers to discuss different aspects of career development opportunities at the company. Employees often see career development resources as indicators that the organization is interested in their future. In addition, by reflecting on the relationships employees have both with the organization (overall) and with their jobs, employers may find that they are able to increase levels of organizational commitment to levels that employees exhibit when "willing to work harder than they have to."

Table of Contents

Introduction

Among the many challenges facing global employers, three trends have significant business implications:

1. The effects of the global economic downturn,
2. The globalization of talent (multinational and multicultural workforces), and
3. Dramatic changes in the age composition of the workforce, which vary from country to country.

According to the results from a recent *McKinsey Global Survey*[1], more than 50% of corporate executives consider these global trends "very" or "extremely" important in a wide range of areas of their businesses, including talent management strategy as well as new product development and reputation building. To date, however, few employers are taking a proactive approach to managing the effects of these global trends.[1] Why? Possibly, because recognizing these trends is the easy part. Securing the right kind of information needed for sound decision-making might be notably difficult.

To gather business-relevant information about the work experiences of employees of different ages who work in different countries, the Sloan Center on Aging & Work at Boston College conducted the Generations of Talent (GOT) Study. The study focused on two key questions:

- Do employees' perceptions of their work experiences vary depending on the country where they work?
- Do employees' perceptions of their work experiences vary depending on their age related factors such as chronological age, career stage, and life stage?

From May 2009 through November 2010, we collaborated with seven multinational employers to design and implement the GOT survey. In total, 11,298 employees, from 24 worksites in 11 different countries where these enterprises operate, responded to the survey.

Focusing on India, this report is one in a series of reports that summarize selected findings from the Generations of Talent Study on a country-by-country basis. This report relies on data from 611 employees employed by two multinational companies in India.

The report is organized into four major sections:

Section 1: The Context of India: Demographic and Economic Highlights

- In this section, we provide selected background information about the demographic and economic context in India.

Section 2: Experiences of Aging

- In this section, we focus on age experiences that are related to chronological age, career stage, and life stage (indicated by dependent care).

Section 3: Work Outcomes

- *Work Engagement among Employees in India—A Comparative Perspective:* Work engagement is an indicator of employees' connection to their work. Highly engaged employees experience a positive, enthusiastic, and affective connection with their work that motivates them to invest in getting the job done well. In this section, we examine how country, age, career stage, and life stage influence work engagement among respondents at the worksites in India.

- *Job Satisfaction among Employees in India—A Comparative Perspective:* Job satisfaction is an indicator that can be related to a range of important work behaviors and decisions, such as the decision to either leave or remain with an employer. In this section, we examine how country, age, career stage, and life stage influence job satisfaction among respondents at the worksites in India.

- *Organizational Commitment among Employees in India—A Comparative Perspective*: Organizational commitment can help employers to gain insight about the general morale among employees. In this section, we examine how country, age, career stage, and life stage influence organizational commitment among respondents at the worksites in India.

Section 4: Methodological Notes

- In this section, we briefly provide characteristics of the sample and data collection methods.

Section 1: The Context of India: Demographic and Economic Highlights

Demographic changes and economic globalization are worldwide phenomena, but not every country is experiencing these trends in the same manner. These global trends have precipitated different opportunities and challenges for people working in different countries.

In this section of the report, we provide a framework and indicators for understanding the current Indian context compared to the demographic and economic conditions in other countries.[1] Figure 1.0 illustrates a way to consider the interaction between age demographics and key characteristics of the economy across 11 countries where the Generations of Talent (GOT) Study data were collected: Botswana, Brazil, China, India, Japan, Mexico, the Netherlands, South Africa, Spain, the United Kingdom, and the United States.

Figure 1.0 A Framework for Considering Countries' Age Demographics and Economic Development

Developed Economies[i]	Developed Economies Young Population	Developed Economies Old Population
Developing Economies	Developing Economies Young Population	Developing Economies Old Population
	Young Population	Old Population

We have selected six age demographic indicators and three economic indicators to distinguish India in the above framework.

1.1 AGE DEMOGRAPHICS

Various statistics can portray the age of a country's population, such as the distribution of its population, the average years of life expectancy, or the median age of the population. The following statistics offer insights about India's age demographics.

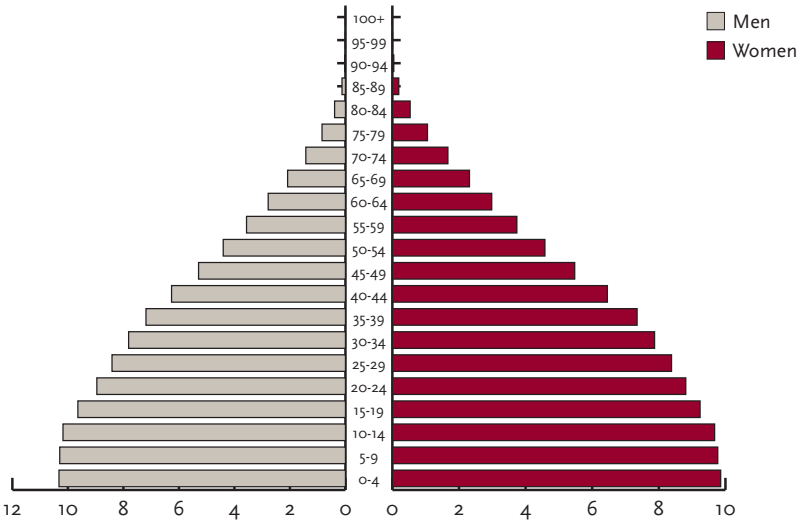
i The terms 'developed economies' and 'developing economies' are often used by academics and organizations to describe the extent of economic development according to selected criteria. Although we have used these terms in this report, we recognize that perspectives about economic development are only relative. Furthermore, given the volatility of economic circumstances in the 21st century, we may be witnessing significant shifts in the economic conditions in some countries.

1.1.1 Distribution of Population

The age distribution in countries with 'young' populations tends to resemble the traditional population pyramid, where there is a greater proportion of younger people compared to older people. By contrast, the age distribution in countries with 'old' populations tends to resemble a rectangle, indicating that the percentage of older cohorts is similar to younger cohorts.

The current population pyramid for India has the standard triangular shape with a wide base. This reflects a much greater proportion of population belonging to the younger age groups as compared to the older cohorts.[2]

Figure 1.1.1 Population Distribution in India, 2010 (by percentage)

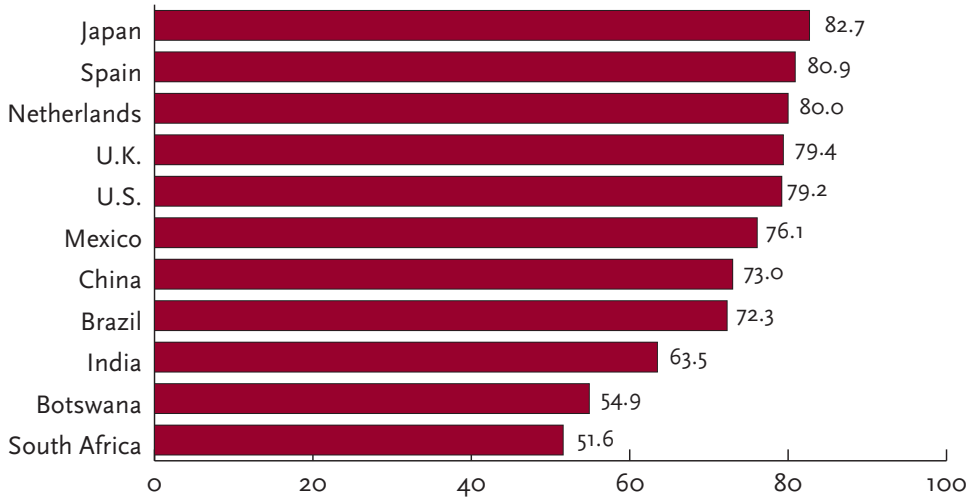


Source: U.S. Census Bureau (2010)[2]

1.1.2 Life Expectancy

In India, during 2005-2010, life expectancy at birth was 63.5 years, the third lowest of the 11 GOT countries, except South Africa and Botswana (see Figure 1.1.2).[3]

Figure 1.1.2 Life Expectancy, 2005-2010

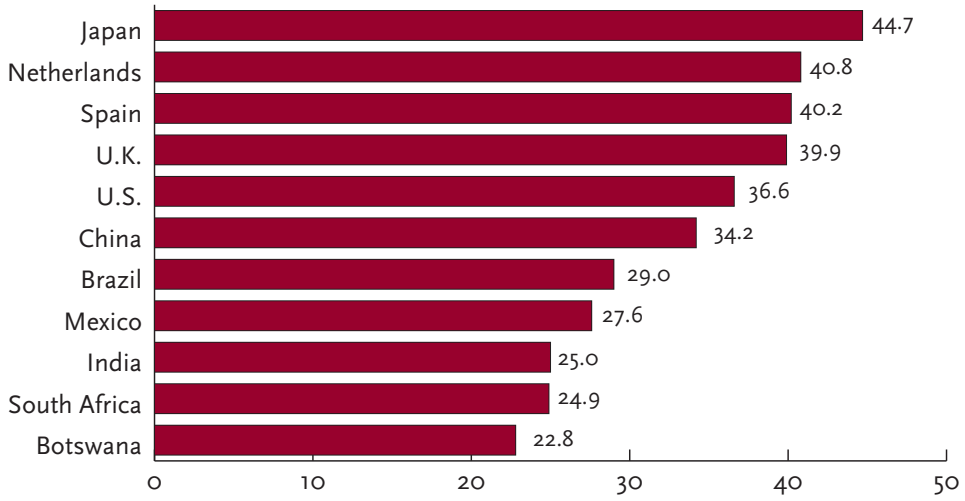


Source: United Nations (2010)[3]

1.1.3 Median Age

As noted in Figure 1.1.3, the median age in India was 25 years as of 2010, making it one of the youngest nations in our 11 country sample, where the median age ranged between 22.8—44.7 years. The median age in India was almost equal to that of South Africa.[3]

Figure 1.1.3 Median Age, 2010

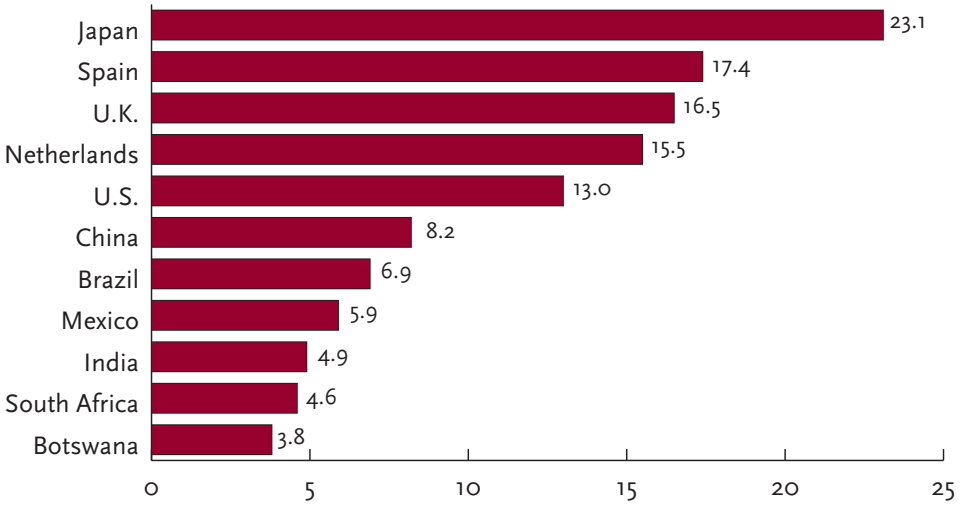


Source: United Nations (2010)[3]

1.1.4 Percentage of Population Aged 65 and Older

The proportion of population aged 65 and older in India was about 4.9% as of 2010, much lower compared to most of the countries in our sample except South Africa and Botswana. In particular, the share of older population in total population for India was less than one-fourth of that in Japan.[4] Among the countries participating in the GOT Study, the average percentage of the population aged 65+ is 10.8%. As evident in Figure 1.1.4, the percentage of the population aged 65+ in the population for Japan, Spain, the U.K., the Netherlands, and the U.S. is higher than 10.8% and the percentage of the population aged 65+ in the other countries is lower than 10.8%.

Figure 1.1.4 Percentage of Population Aged 65 and Older, 2010



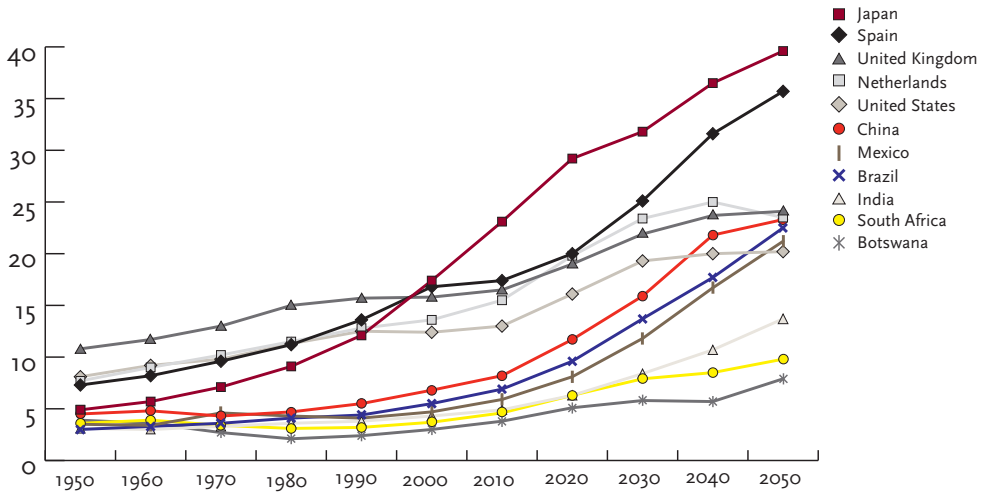
Source: OECD (2010)[4]

Note: Data for Botswana are from United Nations (2010).[3] The data show the "predicted" percentage of population aged 65 and older.

1.1.5 Historical Changes in the Age Demographics

The percentage of older adults (65+) in the total Indian population has been relatively steady during the past six decades, showing a mild rise from 3.1% in 1950 to 4.9% in 2010. However, it is expected to rise at a much faster rate reaching 13.7% by 2050. The pace of population aging in India seems to be slower than that observed in some other countries in our sample such as Japan and Spain (see Figure 1.1.5).[4]

Figure 1.1.5 Historical Changes in Age Demographics: Older Adult (65+) Population as a Percentage of Total Population, 1950-2050

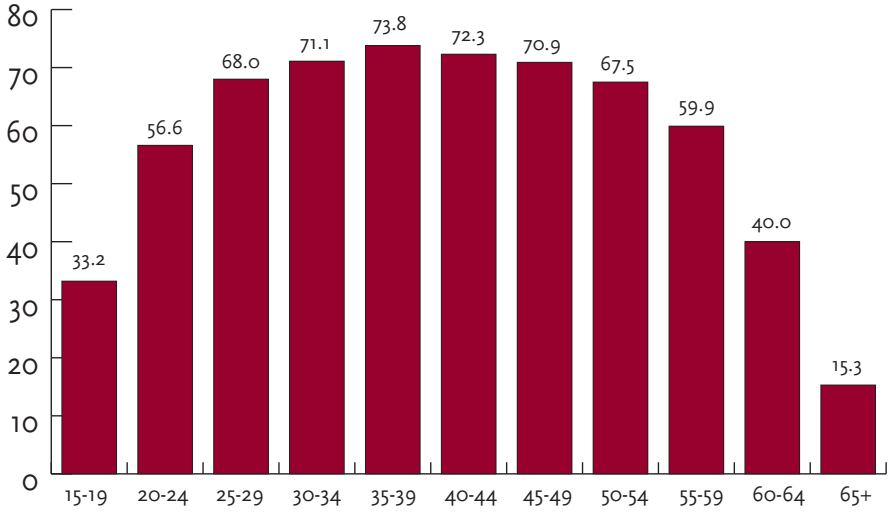


Source: OECD (2010).[4] Data for Botswana are from United Nations (2010).[3]

1.1.6 Age Distribution of the Economically Active Population

As depicted in Figure 1.1.6, in 2009 the share of economically active population in India for all age groups between 25-54 years ranged from 67.5%—73.8%. On the other hand, the proportion of older adults (aged 65+), who were economically active was just about 15%.[5]

Figure 1.1.6 Economically Active Population Rates by Age in India, 2009



Source: ILO (2010)[5]

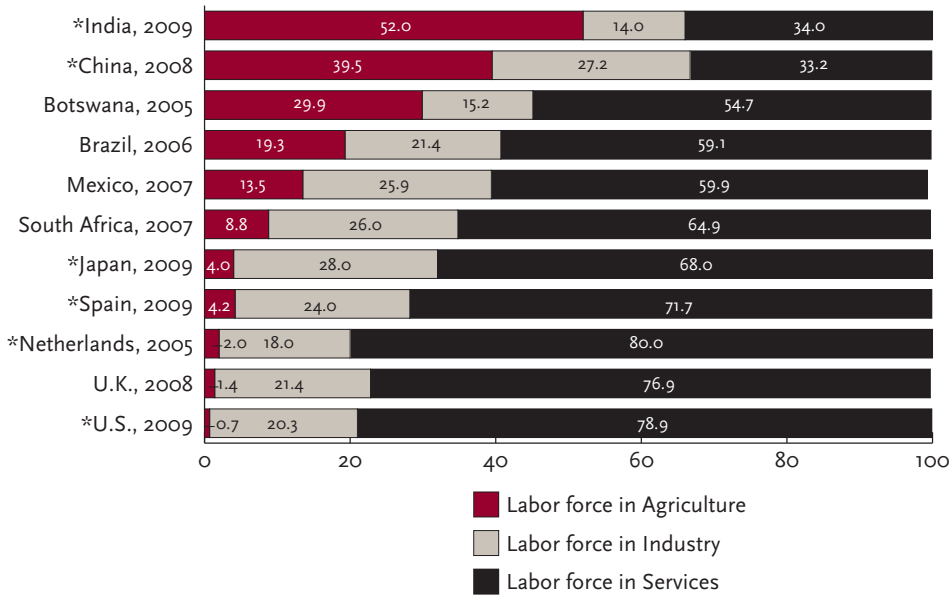
1.2 ECONOMIC INDICATORS

A number of economic indicators such as industry sector structure, GNI per capita[ii], or GDP growth rate[iii] can help distinguish developed economies from developing economies.

1.2.1 Composition of the Labor Force by Industry Sector

In countries with developed economies, the share of the labor force in the service sector dominates the employment contribution of agriculture as well as industry.[iv] On the other hand, a significant portion of the labor force in many developing economies is employed in agriculture and industry. As depicted in Figure 1.2.1, agriculture employs almost 52% of the total labor force in India, followed by services (34%) and Industry (14%). In both India and China, the share of employment attributed to agriculture and industry is more than 60%. On the contrary, the dominance of services in total employment seems to be a common feature for the developed countries included in our study.[6,7]

Figure 1.2.1 Labor Force by Principal Sectors



Source: World Bank (2010a)[6]; *CIA (2010)[7]

ii GNI per capita of a country is the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the mid year population.[6]

iii Growth rate is calculated as the percentage change in a variable from one year to the next.[6]

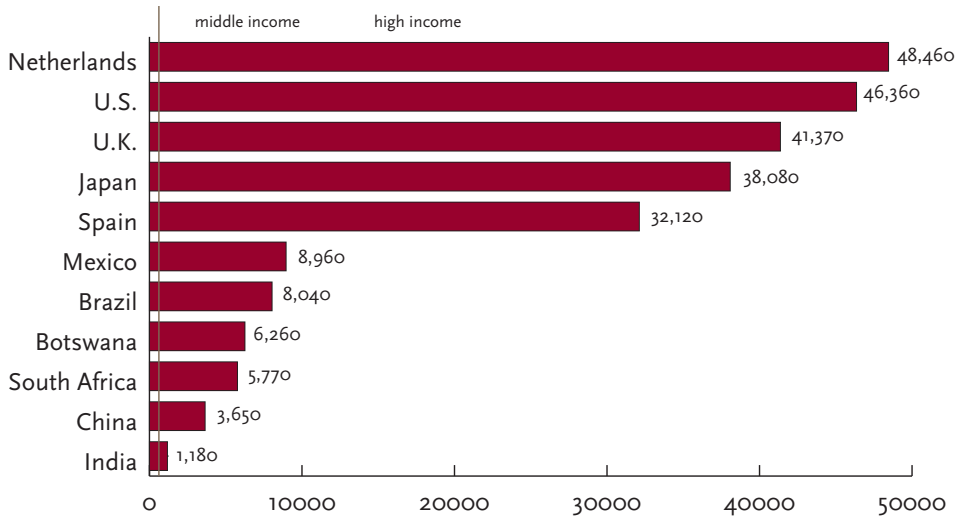
iv Agriculture includes forestry, hunting and fishing. Industry includes manufacturing, construction, mining & quarrying, and public utilities (electricity, gas and water). Services include wholesale and retail trade, restaurants and hotels, transport, storage and communications, financing, insurance, real estate, business services as well as community, social and personal services.[6] The CIA definition refers to percentage of the total labor force by occupation.[7]

1.2.2 Gross National Income (GNI) per Capita

Gross National Income (GNI) per capita is one way to compare the economic performance of different countries and can be used to distinguish between a developed economy and a developing economy.

The World Bank classifies countries with GNI per capita of $12,196 or higher as being 'high' income. The U.S., as well as the Netherlands, the U.K., Japan, and Spain are in this high income group.[v] On the other hand, the GNI per capita in Mexico, Brazil, Botswana, South Africa, China, and India is between $996—$12,195, the range for middle Income countries as defined by the World Bank.[8] The GNI per capita in India as of 2009 was $1,180, the lowest among our 11 GOT countries (see Figure 1.2.2).[6]

Figure 1.2.2 GNI per Capita, 2009 (Current USD)



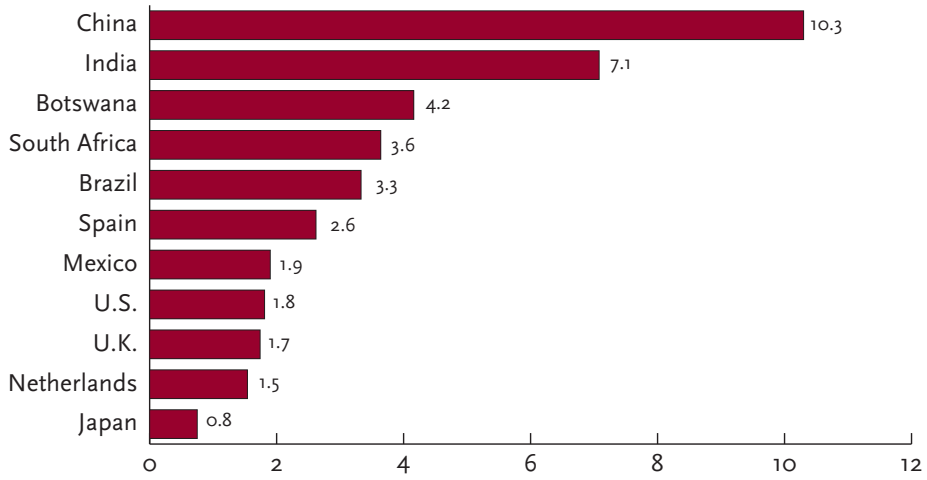
Source: World Bank (2010a)[6]

v According to the World Bank (2010b),[8] economies are divided according to the 2009 GNI per capita, calculated using the World Bank Atlas method. The groups are: low income, $995 or less; lower middle income, $996 - $3,945; upper middle income, $3,946 - $12,195; and high income, $12,196 or more.

1.2.3 GDP Growth Rate

The average annual GDP growth in India and China during the last 10 years has clearly dominated the other nine countries in our study. Average annual GDP growth in India for the past decade has been an impressive 7%, placing it just below China in terms of the fastest growing economies in the past decade (see Figure 1.2.3).[6] India and China are two of the only three Asian countries[iv] that have not experienced contraction during the current global financial crisis.[9] The average annual GDP growth in most of the remaining countries has ranged from 0.8%—4.2%.

Figure 1.2.3 GDP Growth Rate: Average Growth Rate (2000-2009)



Source: World Bank (2010a)[6]

1.3 COUNTRY CONTEXT: CONSIDERATIONS FOR EMPLOYERS

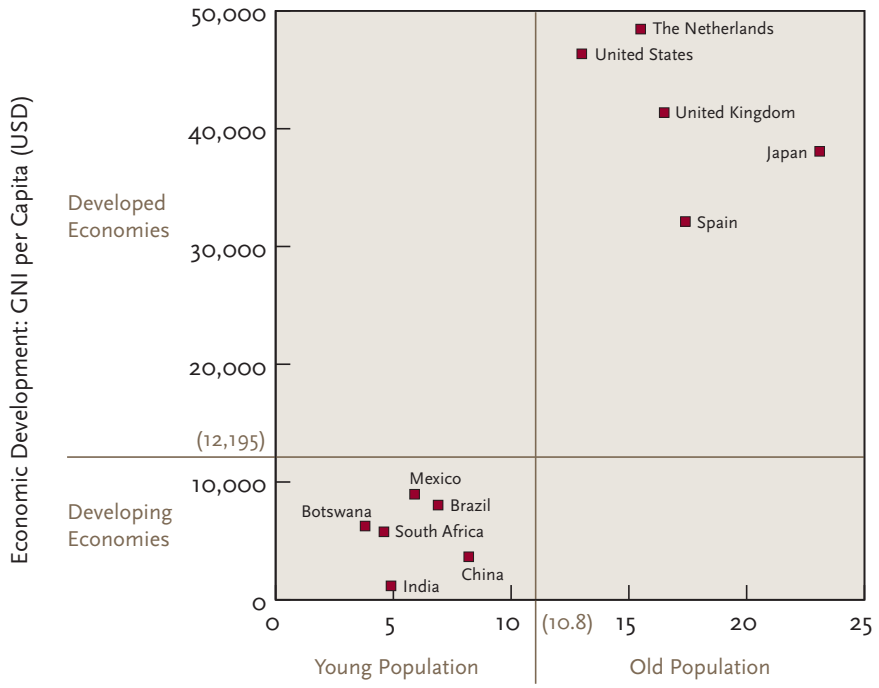
The demographic and economic indicators discussed above offer insights about each country's current situation.

For the purpose of this report, we considered two key cut-offs, or indicators, to locate the 11 countries in the GOT Study into the demographic and economic development framework presented in Figure 1.0: 10.8% of population aged 65 and older, and $12,195 GNI per capita (USD). Figure 1.3 illustrates the classification of India and the other countries included in the GOT Study in two quadrants of the framework.

vi Among the major Asian economies, only those of China, India, and Indonesia did not contract during the global financial crisis.[9]

Based on this framework, six of the countries where data were collected, including India, can be considered 'Young Population & Developing Economies' (Botswana, Brazil, China, India, Mexico and South Africa). For example, 4.9% of the total population in India is aged 65+ with a GNI per capita of $1,180. The remaining five countries were considered 'Old Population & Developed Economies'(Japan, the Netherlands, Spain, the U.K. and the U.S.) None of the countries from the GOT Study were located in either the quadrants 'Old Population & Developing Economies' or 'Young Population & Developed Economies.'

Figure 1.3 Age Demographics and Economic Situations in Generations of Talent Countries



The demographic and economic conditions in India, compared to other countries in the GOT Study, present opportunities for innovative employers, who are managing multi-generational and multi-national talent, to proactively address challenges of age diverse workforces and fluctuating economic shifts. Maintaining an awareness of the economic situation and demographic characteristics of India can assist employers in assessing talent management practices within the country in addition to creating action steps to increase engagement, satisfaction, and commitment among multiple age groups.

Section 2: Experiences of Aging and Work in India

Employers are beginning to express an awareness of shifts in the age demographics of the global workforce. A recent study in the United States found that 40% of the companies in the sample report the aging of the workforce will likely have a "very negative/negative" impact on their organizations in the next three years.[1] Employers' concerns include challenges associated with knowledge transfer and finding the talent they need to address today's complex business problems.

When considering the implications of demographic changes for their organizations, employers often ask: "Who is a 'younger/older' worker?" This is important because the experience of age is complex, particularly in the context of the workplace.

Although we tend to think that "age" refers primarily to chronological age, the experience of aging has numerous dimensions. This section focuses on age experiences that relate to chronological age, career stage, and life stage (as indicated by different types of dependent care).

The data presented in this section and the following sections were generated from information gathered from respondents who participated in the Generations of Talent Study. As noted in Section 4 of this report, the respondents to this survey were employed by companies with worksites in the 11 countries where data were gathered. Although the findings provide important insights about people working in these countries, the descriptive statistics about the age-related characteristics of the respondents may not be representative of the workforces in those countries.

2.1 CHRONOLOGICAL AGE

Chronological age, which refers to the number of years a person has lived, is often used as an indicator for different aspects of the aging experience. It is well recognized, however, that people of the same age can have very different experiences with aging. For example, one employee at 65 can report high energy and no physical/cognitive limitations whereas a colleague of the same age might have a chronic disease.

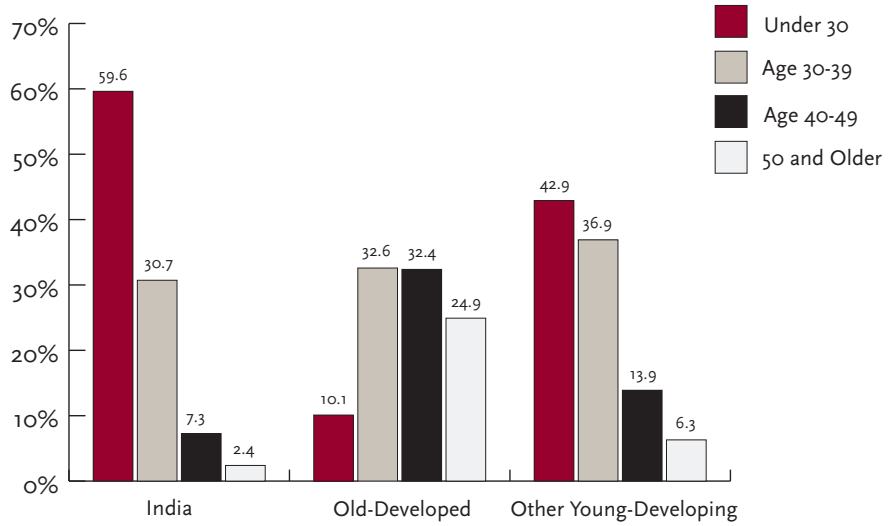
As discussed below, there is also a wide range of chronological ages when people have other age-related experiences (such as the age range associated with being in 'mid-career' or taking care of children younger than 18 years old).

Across the worksites in India, the chronological age range of the respondents to the Generations of Talent Study is 18 to 82 years. Across the worksites in the five "old-developed" countries and the five other "young-developing" countries excluding India in our sample, the age ranges are 20 to 82 years and 18 to 91 years, respectively (see Table 2.2).

Figure 2.1 presents the chronological age distribution by age group for respondents at the worksites in India compared to those working in the "old-developed" countries

and the other "young-developing" countries that participated in the study. As this figure shows, the percentage of respondents under the age of 30 at the worksites in India (59.6%) is significantly higher than the "old-developed" countries (10.1%) as well as the other "young-developing" countries (42.9%). Conversely, the worksites in India have a considerably lower percentage of respondents aged 40-49 and 50 and above (7.3% and 2.4%, respectively) compared to the worksites in the "old-developed" countries (32.4% and 24.9%, respectively) and the other "young-developing" countries (13.9% and 6.3%, respectively) (see Table 4.1b).

Figure 2.1 The Age Distribution of Respondents at the Worksites in India Compared to the Two Country Clusters



Source: Generations of Talent Study

Note: Only statistically significant differences between India and the two country clusters are discussed in the text ($p<.05$).

2.2 CAREER STAGE

The concept of career stage reflects the observation that people tend to gain sets of competencies (skills and knowledge) with the expansion of their occupational roles and responsibilities. Although the progression of mastery varies across occupations, the concept of career stage, also termed "occupational age," recognizes that most employees move from more basic to more advanced levels as they advance in a career.[2,3]

It is possible to define the specific career stages in different ways. It is not uncommon, however, to recognize at least three basic stages: early career, mid-career, and late career.

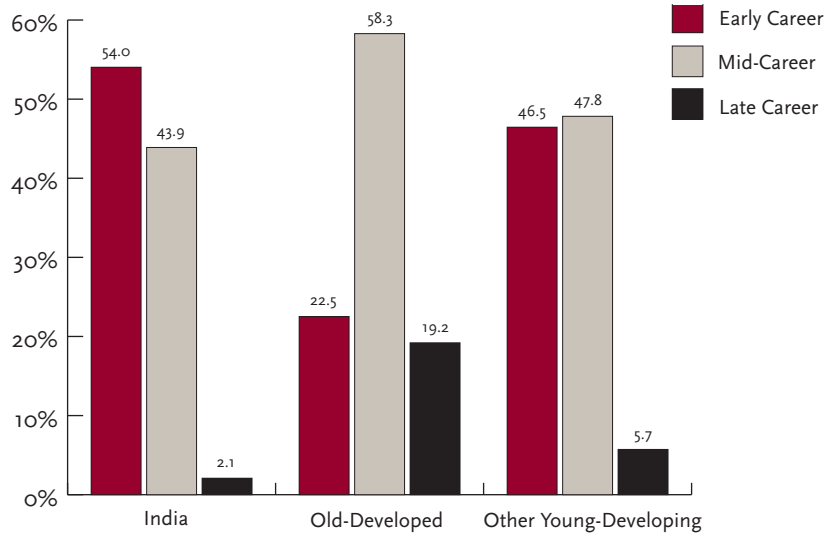
- Early career is typically characterized by exploration and establishment. Employees in early career are focused on getting to know the job and being integrated into the organization.[4] Additionally, employees aim to find a match between themselves, their job, and the organization.[5]

- Mid-career is typically characterized by career goal reappraisal. Employees in mid-career either reaffirm or modify their career or work needs and expectations. However, it is typical that employees would perceive that their careers are plateauing during mid-career (a sense of limited opportunities for career advancement and/or increase in job responsibility).[4]

- Late career is typically experienced in late adulthood. Employees in late career are generally focused on remaining productive in work, maintaining their self-esteem, and possibly preparing for effective retirement.[4]

Figure 2.2 graphically illustrates the percentage of respondents at the worksites in India that classify themselves as early career, mid-career, and late career, as compared to those working in the "old-developed" countries and the other "young-developing" countries that participated in the study. As the figure shows, the percentage of respondents that identify themselves as early career at the worksites in India (54.0%) is significantly higher than the worksites in the"old-developed" countries (22.5%). However, the worksites in India have a significantly lower percentage of mid-career respondents (43.9%) compared to the "old-developed" countries (58.3%). Similarly, the worksites in India have a smaller percentage of late career respondents (2.1%) compared to "old-developed" countries (19.2%) and the other "young developing" countries (5.7%) (see Table 4.1b).

Figure 2.2 Career Stage Distribution of Respondents at the Worksites in India Compared to the Two Country Clusters



Source: Generations of Talent Study

Note: Only statistically significant differences between India and the two country clusters are discussed in the text ($p<.05$).

Interestingly, as suggested by Table 2.2 below, the age ranges associated with each of the career stages are wide. For example, among the respondents at the worksites in India, early career ranges from 18 to 82 years and late career ranges from 18 to 58 years. These data illustrate that, although the mean ages for respondents working in India increase with career stage, their career stages might not always correspond to their chronological ages.

The mean age for each career stage for the respondents at the worksites in India is compared to those respondents at the worksites in the "old-developed" countries and the other "young-developing" countries. Note that even if the mean ages might look somewhat different, they cannot be considered significantly different unless it is stated that they are different in the Table 2.2.

Table 2.2 Mean Age and Age Range of Career Stages among Respondents at the Worksites in India Compared to the Two Country Clusters

Countries	Mean Age and Age Range for Early Career Employees	Mean Age and Age Range for Mid-Career Employees	Mean Age and Age Range for Late Career Employees
India (N=451)	25.3 (18 - 82) years Different from: Old-Developed, Other Young-Developing	34.0 (18 - 75) years Different from: Old-Developed, Other Young-Developing	46.8 (18 - 58) years Different from: No significant differences
Old-Developed (N=4907)	31.4 (20 - 82) years Different from: India, Other Young-Developing	42.3 (25 - 77) years Different from: India, Other Young-Developing	54.5 (27 - 80) years Different from: Other Young-Developing
Other Young-Developing (N=4030)	27.8 (18 - 91) years Different from: India, Old-Developed	36.9 (21 - 91) years Different from: India, Old-Developed	47.6 (23 - 81) years Different from: Old-Developed

Note: Statistical significance tests compared means of career stage subgroups across country clusters ($p<.05$).

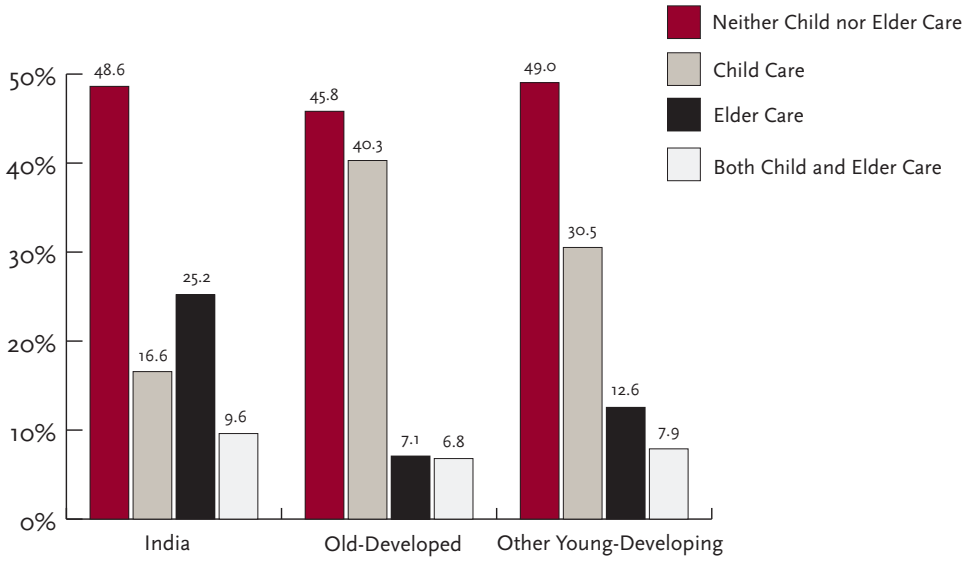
2.3 LIFE STAGE: THE ROLE OF DEPENDENT CARE

Over the life course, individuals experience various events and transitional stages, which shape major roles and responsibilities both in work and personal life.[6] Multiple studies have shown that family and personal life can have a significant impact on work and work experiences can affect personal and family life.[7,8] The work-life paradigm recognizes the importance of different life events and the impact that they can have for employees. For example, life events and transitions, such as taking care of children or an older parent, can affect the ways that people fulfill their roles and responsibilities both at work and outside off work.[6,9,10,11,12, 13,14,15]

In this report, we focus on the dependent caregiving responsibilities of employees as an indicator of a life stage that can influence expectations and experiences at work. Dependent care is often life-changing as it typically requires an investment of time, energy, and financial resources. Employees might find that they need to make adjustments at home and possibly at work in order to fulfill caregiving responsibilities. To assess whether life stage as indicated by dependent care impacts employees' expectations and experiences at work, we compared different types of dependent care: child care (18 years and younger), elder care (parent(s) or parent(s)-in-law), both child and elder care, and neither child nor elder care.

As indicated by Figure 2.3, 48.6% of respondents to the Generations of Talent Study who work in India report that they do not have child or elder care responsibilities, while 16.6% have child care responsibilities, 25.2% have elder care responsibilities, and 9.6% provide both child and elder care. Across the worksites in India, the percentage of respondents with child care responsibilities (16.6%) is significantly lower than the respondents working in the"old-developed" countries (40.3%) as well as the other "young-developing" countries (30.5%). On the other hand, the worksites in India have a considerably higher percentage of respondents with elder care responsibilities (25.2%) compared to the "old-developed" countries (7.1%) and the other "young-developing" countries (12.6%). There are no statistically significant differences in the percentages of respondents with neither child nor elder care responsibilities as well as both child and elder care responsibilities between the worksites in India and the two country clusters (see Table 4.1b).

Figure 2.3 Types of Dependent Care Responsibilities among Respondents at the Worksites in India Compared to the Two Country Clusters



Source: Generations of Talent Study

The age range among respondents with different types of dependent care responsibilities is wide in India, as noted in Table 2.3 below. Specifically, the age of respondents with neither child nor elder care responsibilities ranges from 18 to 82 years, and the age of respondents with child care responsibilities ranges from 18 to 75 years. The age of respondents with elder care responsibilities ranges from 18 to 49 years. Lastly, the age of those with both child and elder care responsibilities ranges from 18 to 55 years.

The mean age for dependent care responsibilities among respondents at the worksites in India is compared to the respondents working in the"old-developed" countries and the other "young-developing" countries. Note that even if the mean ages might look somewhat different, they cannot be considered significantly different unless it is stated that they are different in Table 2.3.

Table 2.3 Age Range of Dependent Care Responsibilities among Respondents at the Worksites in India Compared to the Two Country Clusters

Countries	Mean Age and Age Range for Those Giving Neither Child nor Elder Care	Mean Age and Age Range for Those Giving Child Care	Mean Age and Age Range for Those Giving Elder Care	Mean Age and Age Range for Those Giving Both Child and Elder Care
India (N=451)	26.8 (18 - 82) years Different from: Old-Developed, Other Young-Developing	37.3 (18 - 75) years Different from: Old-Developed	27.3 (18 - 49) years Different from: Old-Developed, Other Young-Developing	36.3 (18 - 55) years Different from: Old-Developed
Old-Developed (N=4907)	41.5 (20 - 82) years Different from: India, Other Young-Developing	41.7 (20 - 77) years Different from: India, Other Young-Developing	47.7 (20 - 71) years Different from: India, Other Young-Developing	44.2 (20 - 75) years Different from: India, Other Young-Developing
Other Young-Developing (N=4030)	30.9 (18 - 85) years Different from: India, Old-Developed	36.9 (18 - 91) years Different from: Old-Developed	30.9 (18 - 76) years Different from: India, Old-Developed	37.4 (18 - 91) years Different from: Old-Developed

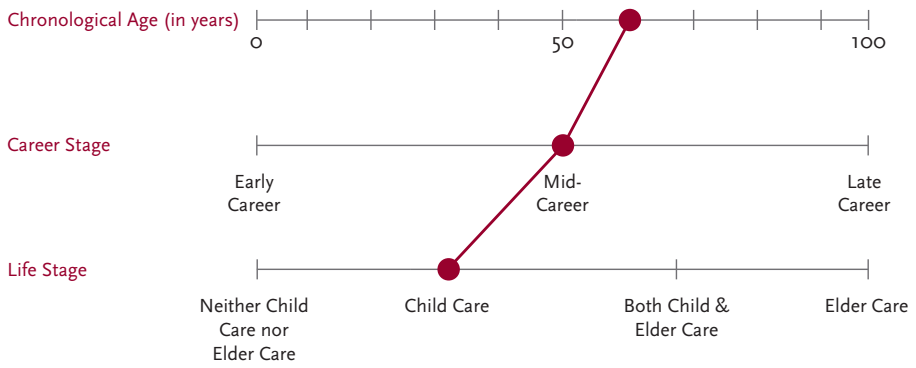
Note: Statistical significance tests compared means of life stage subgroups across country clusters ($p<.05$).

2.4 AGING AND WORK IN INDIA: A PROFILE

Employment experiences can be affected by societal expectations about age, as well as opportunities and constraints that may vary for employees of different ages.[16,17] Examining the employment experiences of employees through the lenses of age, employers can gain insight about the extent to which their human resource programs and management policies reflect the needs of employees of different ages, career stages, and life stages.

In this section of the report, we have discussed the fact that employees' experiences of aging can vary, depending on the specific dimension of age that is particularly relevant to them. As suggested by the sample age profile in Figure 2.4, an employee who is "old" in terms of chronological age could still be "mid-career" in terms of career stage and might still have child care responsibilities.

Figure 2.4 Sample Age Profile



Source: Generations of Talent Study

Given the complexities of age, employers should consider how to customize talent management policies and programs to meet the needs of employees whose employment experiences reflect the nuances of their experiences with aging.

Section 3: Work Outcomes

Top employers seek information on work outcomes in order to manage their global workforces. In this report, we review three important work outcomes: work engagement, job satisfaction, and organizational commitment. For each outcome, we provide a brief introduction outlining the importance and definition of that outcome. Afterwards, we present the results of several analyses that address the following questions:

Impact of Country:

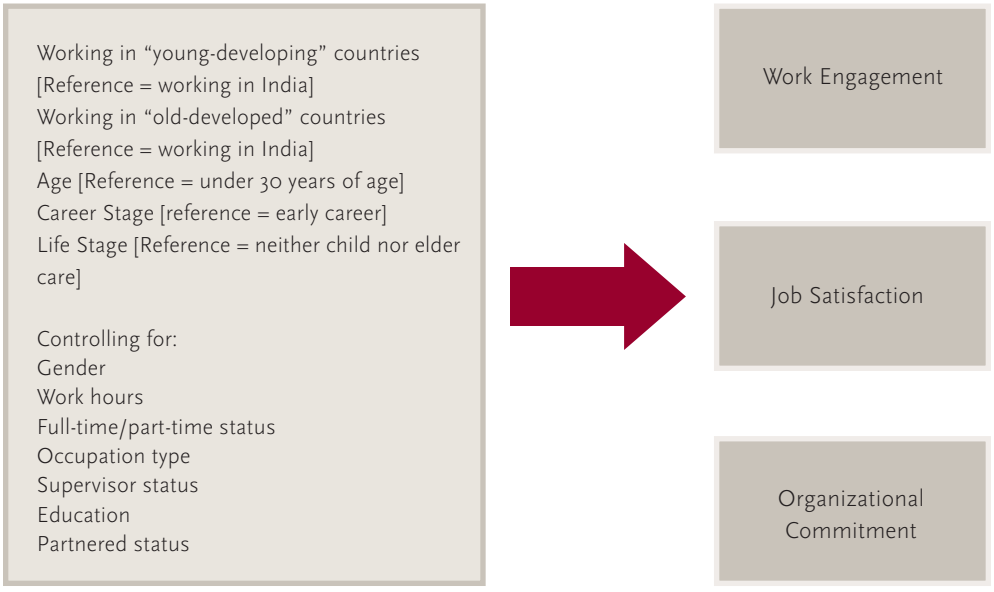
- Is each work outcome among respondents at the worksites in India different from outcomes among those working in the five "old-developed" countries and the five other "young-developing" countries after controlling for demographic factors, job characteristics, age, career stage, and life stage?

Impact of Age/Career Stage/Life Stage:

- Does each work outcome among respondents at the worksites in India vary by age group, career stage, and/or life stage once we control for demographic factors and job characteristics?

Using data from the Generations of Talent Study, we will use the framework summarized in Figure 3.0 to answer these questions in order to provide employers with insight into the overall factors that might affect the level of employees' work engagement, job satisfaction, and organizational commitment.

Figure 3.0 The Effect of Age/Career Stage/Life Stage/ and Country on Work Engagement /Job Satisfaction/Organizational Commitment



3.1 WORK ENGAGEMENT

Work engagement refers to employees' positive feelings or emotions toward their work. Engagement is defined as "a positive work-related state of fulfillment that is characterized by vigor, dedication, and absorption."[1] Work engagement is the opposite of work burnout. Therefore, "contrary to those who suffer from burnout, engaged employees have a sense of energetic and effective connection with their work activities, and they see themselves as able to deal well with the demands of their jobs."[1] When employees are well engaged in their work, they find their work to be personally meaningful, have positive feelings about their work, consider their workload to be manageable, and are optimistic about the future of their work—that is, they have a positive and fulfilling work-related state of mind.[2,3]

Particularly during tough economic times, such as during the global financial crises, employers have good reasons to be concerned about their employees' work engagement. Research has shown that only about one in every five employees reported that they were highly engaged in their work. The Gallup organization estimates that disengaged employees cost U.S. employers a significant amount of money – between $250 and $350 billion a year. Over 600 CEOs from countries around the world reported that they considered work engagement as one of the top five most important challenges facing management.[4,5]

3.1.1 Work Engagement in India

This section assesses work engagement using 11 items adapted from the Utrecht Work Engagement Scale (UWES). Table 3.1.1 presents the frequencies of responses to these work engagement items based on the data collected from respondents at the worksites in India. For example, across all the respondents working in India, about three-forth (75.3%) report that they very often to always "feel happy when they work intensely." In addition, 73.8% and 70.8% of the respondents report that very often to always "time flies when they are working" and that very often to always they are "immersed in their job." Also, over half of the respondents (52.0%) very often to always "feel bursting with energy at their work." Lastly, 38.8% of the respondents report that very often to always they "get carried away when they are working."

vii The UWES is a standardized and globally validated measure to assess employee work engagement. Employees were asked to indicate the frequency of experiencing their work in a particular way. Each item was assessed on a scale ranging from never (1) to always (7).[1]

Table 3.1.1 Work Engagement among Respondents at the Worksites in India

	Percent Never	Percent Almost Never	Percent Rarely	Percent Sometimes	Percent Often	Percent Very Often	Percent Always
At my work, I feel bursting with energy. (N=456)	2.8%	4.1%	6.2%	16.5%	18.4%	38.5%	13.5%
I find the work that I do full of meaning and purpose. (N=457)	2.3%	3.3%	5.5%	12.1%	16.7%	36.7%	23.4%
I am enthusiastic about my job. (N=456)	2.7%	2.7%	4.1%	9.6%	17.4%	36.0%	27.3%
I am immersed in my work. (N=457)	2.2%	1.4%	4.6%	6.8%	14.1%	41.3%	29.5%
Time flies when I'm working. (N=112)	0.0%	0.0%	3.0%	15.4%	7.7%	40.1%	33.7%
When I get up in the morning, I feel like going to work. (N=112)	2.5%	0.1%	3.0%	12.3%	16.5%	40.8%	24.6%
At my job, I feel strong and vigorous. (N=112)	0.0%	3.1%	8.5%	13.7%	11.8%	40.9%	22.1%
I am proud of the work that I do. (N=112)	3.3%	0.0%	8.0%	9.3%	15.9%	33.9%	29.7%
I feel happy when I am working intensely. (N=112)	0.0%	0.0%	4.4%	8.3%	11.9%	38.7%	36.6%
My job inspires me. (N=112)	3.4%	0.0%	12.0%	10.8%	19.0%	35.0%	19.9%
I get carried away when I am working. (N=112)	3.7%	0.7%	7.6%	28.0%	21.2%	21.4%	17.4%

We combined the answers to the questions listed in Table 3.1.1 to get an overall score of work engagement. The scores could range from 1 to 7. We considered scores as follows:

- Scores ranging from 1 to 2.99 = low work engagement
- Scores ranging from 3 to 4.99 = moderate work engagement
- Scores ranging from 5 to 7 = high work engagement

The average (mean) score of work engagement among respondents at the worksites in India is 5.5.

3.1.2 Impact of Country on Work Engagement

- Is work engagement among respondents at the worksites in India different from work engagement among those working in the five "old-developed" countries and the five other "young-developing" countries after controlling for demographic factors, job characteristics, age, career stage, and life stage?

  ⇨ No, work engagement among respondents at the worksites in India is not significantly different from that of the respondents working in the two country clusters after controlling for demographic factors, job characteristics, and age-related factors (that is, the differences in the work engagement scores between the worksites in India and the two country clusters are not statistically significant) (see Table 4.2a).

3.1.3 Impact of Age, Career Stage, and/or Life Stage on Work Engagement

- Does work engagement among respondents at the worksites in India vary by age group, career stage, and/or life stage once we control for demographic factors and job characteristics?

  ⇨ No, work engagement among respondents at the worksites in India does not vary by age, career stage, and life stage (that is, the differences in the mean scores are not statistically significant after controlling for demographic factors and job characteristics) (see Tables 4.2b, 4.2b-1, 4.2c, and 4.2d).

3.2 JOB SATISFACTION

Job satisfaction refers to a pleasurable emotional state resulting from the appraisal of one's job.[6,7,8] Job satisfaction is a widely examined construct in academic and business research in a variety of organizational settings.[9,10]

Employers have good reasons to be concerned with their employees' job satisfaction because job satisfaction can be an important indicator of employees' current and future work behaviors including work performance, absenteeism, and turnover.[11,12,13] Additionally, some research suggests that employees' job satisfaction is significantly correlated with their life satisfaction overall.[14,15]

3.2.1 Job Satisfaction in India

The Generations of Talent questionnaire includes 13 items that assess satisfaction with important aspects of work. Table 3.2.1 presents the frequencies of responses to job satisfaction items among respondents at the worksites in India. Across all respondents at the worksites in India, 88.3% and 78.8% are moderately to strongly satisfied with the relationships with their subordinates and co-workers/peers, respectively. On the other hand, 57.9% of the respondents are moderately to strongly satisfied with their organizational supervisor. In addition, 73.2% of the respondents are moderately to strongly satisfied with the inclusiveness of their organizational culture in terms of welcoming diverse employees. Also, about half of the respondents (49.6%) are moderately to strongly satisfied with the way their job allows them to make a difference in their community or the world. However, just 37.1% of the respondents are moderately to strongly satisfied with the benefits that promote health, wellness, and psychological well-being.

viii The index of job satisfaction comprised of 13 items from multiple sources including standardized scales[16,17] and original items developed by the Sloan Center on Aging & Work. Employees were asked to indicate the degree of satisfaction with their job. Each item was assessed on a scale ranging from strongly dissatisfied (1) to strongly satisfied (6).

Table 3.2.1 Job Satisfaction among Respondents at the Worksites in India

	Percent Strongly Dissatisfied	Percent Moderately Dissatisfied	Percent Somewhat Dissatisfied	Percent Somewhat Satisfied	Percent Moderately Satisfied	Percent Strongly Satisfied
*Your job security. (N=431)	0.8%	1.0%	4.8%	25.3%	39.4%	28.7%
**Resources and opportunities for training and development to improve your skills or learn new skills that your employer provides. (N=430)	4.2%	5.9%	10.3%	27.5%	39.3%	12.7%
**Benefits that have monetary value such as profit sharing schemes; retirement benefits; paid time off; paid sick days or medical leave; subsidies for child care, dependent care, education, or housing; health insurance; or long-term care insurance. (N=430)	5.8%	8.2%	14.8%	31.9%	28.7%	10.6%
**Benefits that promote health, wellness, and psychological well-being, such as nutrition programs; fitness facilities; or programs that provide information, counseling, or referrals. (N=429)	7.3%	5.1%	15.1%	35.4%	25.9%	11.2%
*The sense of accomplishment you get from work. (N=430)	4.0%	4.8%	8.8%	28.8%	37.5%	16.1%
***The extent to which you use your skills and abilities on your job. (N=430)	4.7%	4.0%	9.7%	22.2%	42.0%	17.4%
**The way your job allows you to make a difference in your community or the world. (N=429)	4.6%	5.1%	12.8%	27.9%	33.7%	15.9%
****The person who supervises you -- your organizational superior. (N=430)	5.6%	2.8%	13.5%	20.2%	39.7%	18.2%
****Your relations with others with whom you work -- your co-workers or peers. (N=425)	0.9%	1.7%	2.3%	16.3%	51.0%	27.8%
***Your working relationships with subordinates. (N=192)	0.0%	0.1%	0.1%	11.5%	52.7%	35.6%
****Opportunities which exist in this organization for advancement or promotions. (N=424)	9.3%	6.7%	16.5%	24.9%	32.3%	10.3%
***Your physical work environment. (N=425)	3.5%	3.2%	6.2%	15.5%	49.9%	21.6%
**The inclusiveness of your organizational culture in terms of welcoming diverse employees. (N=425)	3.4%	1.3%	3.8%	18.3%	45.3%	27.9%

* Original item developed based on work of Hackman & Oldham (1976)[18]

** Original item developed by Sloan Center on Aging & Work

*** Item adapted from Hofstede (2001)[16]

**** Item from Tsui et al., (1992)[17]

We combined the answers to the questions listed in Table 3.2.1 to get an overall score of job satisfaction. The scores could range from 1 to 6. We considered scores as follows:

- Scores ranging from 1 to 2.49 = low job satisfaction
- Scores ranging from 2.5 to 4.49 = moderate job satisfaction
- Scores ranging from 4.5 to 6 = high job satisfaction

The average (mean) score of job satisfaction among respondents at the worksites in India is 4.5.

3.2.2 Impact of Country on Job Satisfaction

- Is job satisfaction among respondents at the worksites in India different from job satisfaction among those working in the five "old-developed" countries and the five other "young-developing" countries after controlling for demographic factors, job characteristics, age, career stage, and life stage?

  ⇨ No, job satisfaction among respondents at the worksites in India is not significantly different from that of the respondents in the two country clusters after controlling for demographic factors, job characteristics, and age-related factors (that is, the differences in the job satisfaction scores between the respondents in India and the two country clusters are not statistically significant) (see Table 4.2a).

3.2.3 Impact of Age, Career Stage, and/or Life Stage on Job Satisfaction

- Does job satisfaction among respondents at the worksite in India vary by age group, career stage, and/or life stage once we control for demographic factors and job characteristics?

  ⇨ No, job satisfaction among respondents at the worksites in India does not vary by age, career stage, and life stage (that is, the differences in the mean scores are not statistically significant after controlling for demographic factors and job characteristics) (see Tables 4.2b, 4.2c, and 4.2d).

3.3 ORGANIZATIONAL COMMITMENT

Organizational commitment generally refers to the relative strength of an employee's involvement in a particular organization.[19,20] This concept might be characterized by at least three related factors:

- A strong psychological attachment and acceptance of the organization's goals and values;
- A willingness to exert considerable effort on behalf of the organization; and
- A strong desire to remain in the organization.[20,21,22,23,24]

Organizational commitment is central to the study of organizational behavior. Various studies provide support for the relationships between employees' organizational commitment and employees' attitudes or behaviors.[19,25,26] Organizational commitment has been studied in the public, private, and non-profit sector, and internationally.[27,28] Research shows that employees who are more committed demonstrate higher job performance, less job displeasure, diminished intent to leave, and less stress.[29,30]

3.3.1 Organizational Commitment in India

The Generations of Talent questionnaire includes nine questions that assess employees' commitment to the organization adapted from Mowday et al. (1979). Table 3.3.1 presents the frequencies of responses to organizational commitment items for respondents at the worksites in India. Across the worksites in India, 83.7% of respondents moderately to strongly agree that they are "extremely glad to have chosen their organization to work for over others they were considering at the time of joining." Moreover, 79.8% and 77.9% of the respondents moderately to strongly agree that they are "proud to be working with their organization" and that they are "willing to work harder than they have to in order to help their organization succeed," respectively. In addition, 76.3% of the respondents moderately to strongly agree that they "talk up their organization to their friends as a great organization to work for." Lastly, only 24.5% and 17.6% of the respondents moderately to strongly agree that they will "take almost any job to keep working for their organization" and that they "feel very little loyalty to their organization," respectively.

ix We used the U.S. General Social Survey (GSS) adaptation of the original Mowday et al. (1979)[20] organizational commitment scale. Employees were asked to indicate their agreement with statements about their commitment. Each item was assessed on a scale ranging from strongly disagree (1) to strongly agree (6). When creating the scale, we reversed one item so that the higher scores would represent higher organizational commitment.

Table 3.3.1 Organizational Commitment among Respondents at the Worksites in India

	Percent Strongly Disagree	Percent Moderately Disagree	Percent Somewhat Disagree	Percent Somewhat Agree	Percent Moderately Agree	Percent Strongly Agree
*To help this organization succeed, I am willing to work harder than I have to. (N=479)	2.1%	1.2%	4.0%	14.8%	38.0%	39.9%
*I would take almost any job to keep working for this organization. (N=479)	16.1%	14.2%	27.8%	17.4%	10.5%	14.0%
*I would turn down another job for more pay in order to stay with this organization. (N=478)	9.4%	11.7%	20.7%	26.2%	19.5%	12.4%
*I feel very little loyalty to this organization. (N=117)	31.4%	20.7%	17.0%	13.3%	11.2%	6.4%
*I find that my values and the organization's are very similar. (N=117)	2.4%	4.0%	22.6%	19.2%	35.0%	16.9%
*I am proud to be working for this organization. (N=117)	0.6%	2.8%	0.5%	16.3%	47.3%	32.5%
**I talk up this organization to my friends as a great organization to work for. (N=117)	0.7%	3.3%	1.5%	18.2%	39.4%	36.9%
**This organization really inspires the very best in me in the way of job performance. (N=117)	1.4%	3.3%	9.0%	26.8%	28.9%	30.6%
**I am extremely glad that I chose this organization to work for over others I was considering at the time I joined. (N=117)	0.6%	3.3%	1.5%	10.9%	41.1%	42.6%

* Items from the General Social Survey (Adapted version of Mowday et al. (1979) scale)[31]

** Items from Mowday et al. (1979)[20]

We combined the answers to the questions listed in Table 3.3.1 to get an overall score of organizational commitment. The scores could range from 1 to 6. We considered scores as follows:

- Scores ranging from 1 to 2.49 = low organizational commitment
- Scores ranging from 2.5 to 4.49 = moderate organizational commitment
- Scores ranging from 4.5 to 6 = high organizational commitment

The average (mean) score of organizational commitment among respondents at the worksites in India is 4.5.

3.3.2 Impact of Country on Organizational Commitment

- Is organizational commitment among respondents at the worksites in India different from organizational commitment in the five "old-developed" countries and the five other "young-developing" countries after controlling for demographic factors, job characteristics, age, career stage, and life stage?

  ⇨ No, organizational commitment among respondents at the worksites in India is not significantly different from that of the respondents in the two country clusters after controlling for demographic factors, job characteristics, and age-related factors (that is, the differences in the organizational commitment scores between the respondents in India and the two country clusters are not statistically significant) (see Table 4.2a).

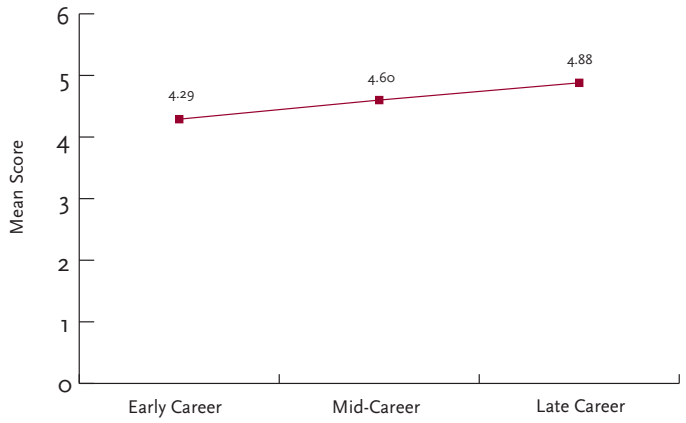
3.3.3 Impact of Age, Career Stage, and/or Life Stage on Organizational Commitment

- Does organizational commitment among respondents at the worksites in India vary by age group, career stage, and/or life stage once we control for demographic factors and job characteristics?

  ⇨ Yes, organizational commitment among respondents at the worksites in India varies by career stage (see Table 4.2c).
  ⇨ No, organizational commitment among respondents at the worksites in India does not vary by age and life stage (that is, the differences in the mean scores are not statistically significant after controlling for demographic factors and job characteristics) (see Tables 4.2b, and 4.2d).

Figure 3.3.3 graphically illustrates the relationship between career stage and organizational commitment among respondents at the worksites in India. Specifically, this figure presents the predicted mean scores of organizational commitment by career stage among respondents at the worksites in India. It shows that after controlling for demographic factors and job characteristics, the level of respondents' organizational commitment among worksites in India is lower among those who consider themselves to be in early career stage (4.29) than among the mid-career respondents (4.60). However, there are no statistically significant differences between mid and late career respondents as well as between early and late career respondents.

Figure 3.3.3 Organizational Commitment by Career Stage among Respondents at the Worksites in India



Section 4: Methodological Notes

4.1 DATA COLLECTION AND SAMPLE

From May 2009 through November 2010, The Sloan Center on Aging & Work collaborated with seven multinational companies. In total, 24 worksites in 11 countries participated in the study, and 11,298 individual employees responded to the survey. Employees were invited to complete one 30 minute online survey during work time which they were able to access on a secure website. The survey was translated to Japanese, Mandarin Chinese, Brazilian Portuguese, and Spanish.

The survey consists of the core questions (questions that were included in the surveys made available to each respondent) and module questions (additional, complementary questions, a subset of which was randomly assigned to the respondents). The survey focused on employees' perceptions of their work experiences, workplace-based resources, demographic information, and their assessments of their health and well-being at work and in their lives in general.

The data collected in the GOT Study allow us to examine a range of experiences at worksites in India in comparison to worksites in other countries. However, readers should keep in mind that the findings may not be representative of all employees at a worksite, in a country, or in a multinational organization as a whole.

As indicated in Table 4.1a, the sample in India includes employees working for two multinational organizations that have worksites in India. The sample in the other "young-developing" countries includes employees working at five companies that have worksites at some of the five other "young-developing" countries, including Botswana, Brazil, China, Mexico, and South Africa. Three companies participated in the study in China and Brazil, two companies participated in the study in Mexico, and only one company participated in each of the two remaining countries, Botswana and South Africa. The sample in the "old-developed" countries includes employees working at six companies that have worksites in some of the five "old-developed" countries, including the U.S., the U.K., Spain, Japan, and the Netherlands. Three companies participated in the study in the Unitec States and the United Kingdom, and two companies participated in the study in Spain, Japan, and the Netherlands.

Table 4.1a Number of Worksites within Country Clusters

	Countries	Number of Worksites
Old-Developed Countries	Japan	2
	Spain	2
	Netherlands	2
	United Kingdom	3
	United States	3
Young-Developing Countries	Botswana	1
	Brazil	3
	China	3
	India	2
	Mexico	2
	South Africa	1

Overall, the multinational organizations that participated are affiliated with a range of industry sectors including information technology; professional, scientific and technical services; finance and insurance; electricity production, distribution and transport; and pharmaceuticals.

Table 4.1b below summarizes the main characteristics of the total sample in India compared to the samples in the "old-developed" countries and the other "young-developing" countries. The last column of this table indicates significant differences of employees' characteristics in India from those in the five "old-developed" countries as well as in the five other"young-developing" countries. The sample in India has a lower percentage of women (28.5%) and a higher percentage of men (71.5%) compared to the other "young-developing"countries (53.0% and 47.0%, respectively). The sample in India has a significantly higher percentage of full-time workers (99.3%) and a significantly lower percentage of part-time workers (0.7%) compared to the "old-developed" countries (95.2% and 4.8%, respectively). Also, average work hours reported by the respondents at the worksites in India (47.7) are longer than the "old-developed" countries (42.5). The percentage of respondents under 30 years of age among the sample in India (59.6%) is higher than the "old-developed" countries (10.1%) as well as the other "young-developing" countries (42.9%). Conversely, the sample in India has a lower percentage of respondents aged 40-49 and 50 and above (7.3% and 2.4%, respectively) compared to the "old-developed" countries (32.4% and 24.9%, respectively) as well as the other "young-developing" countries (13.9% and 6.3%, respectively). In addition, the sample in India has a higher percentage of early career respondents (54.0%) but a lower percentage of mid-career respondents (43.9%) compared to the "old-developed"countries (22.5% and 58.3%, respectively). Also, the percentage of respondents with child care responsibilities among the sample in India (16.6%) is lower than the "old-developed" countries (40.3%) as well as the other "young-developing" countries (30.5%). On the other hand, the sample in India has a higher percentage of respondents with elder care responsibilities (25.2%) compared to the "old-developed" countries (7.1%) and the other "young-developing" countries (12.6%). Lastly, the sample in India has a lower percentage of respondents (30.0%) with supervisory responsibilities compared to the other "young-developing" countries (45.9%).

Table 4.1b Characteristics of the Sample in India and the Two Country Clusters

Characteristics	India	Old-Developed	Other Young-Developing	Significant Differences from India
% Women (N=8961)	28.5%	33.5%	53.0%	Significantly Different from Other Young-Developing
% Men (N=8961)	71.5%	66.5%	47.0%	Significantly Different from Other Young-Developing
% Full-time (N=11040)	99.3%	95.2%	95.4%	Significantly Different from Old-Developed
% Part-time (N=11040)	0.7%	4.8%	4.6%	Significantly Different from Old-Developed
Average work hours (N=10147)	47.7	42.5	48.3	Significantly Different from Old-Developed
% Under 30 years old (N=9388)	59.6%	10.1%	42.9%	Significantly Different from Old-Developed and Other Young-Developing
% Age 30 - 39 (N=9388)	30.7%	32.6%	36.9%	No Difference
% Age 40 - 49 (N=9388)	7.3%	32.4%	13.9%	Significantly Different from Old-Developed and Other Young-Developing
% 50 years old and above (N=9388)	2.4%	24.9%	6.3%	Significantly Different from Old-Developed and Other Young-Developing
% Early career (N=9223)	54.0%	22.5%	46.4%	Significantly Different from Old-Developed
% Mid-career (N=9223)	43.9%	58.3%	47.8%	Significantly Different from Old-Developed
% Late career (N=9223)	2.1%	19.2%	5.7%	Significantly Different from Old-Developed and Other Young-Developing
% With neither child nor elder care responsibilities (N=8817)	48.6%	45.8%	49.0%	No Difference
% With child care responsibilities (N=8817)	16.6%	40.3%	30.5%	Significantly Different from Old-Developed and Other Young-Developing
% With elder care responsibilities (N=8817)	25.2%	7.1%	12.6%	Significantly Different from Old-Developed and Other Young-Developing
% With both child and elder care responsibilities (N=8817)	9.6%	6.8%	7.9%	No Difference
% With supervisory responsibilities (N=11123)	30.0%	33.2%	45.9%	Significantly Different from Other Young-Developing

Note: Only statistically significant differences between India and the two country clusters are discussed in the text ($p<.05$).

4.2 NOTES ON DATA ANALYSIS STRATEGIES

4.2.1 Model-building Strategy

In order to investigate each of the questions posed in Section 3, a series of regression analyses were conducted using Stata 11. Each of the outcome variables (work engagement, job satisfaction, and organizational commitment) were regressed on a set of control variables, including gender, income, work hours, full-time/part-time status, occupation type, supervisor status, education, lives with spouse, and company, in addition to age-related factors and country indicators.

The effects of country location were tested simultaneously with all of the age-related factors. These analyses were conducted on the entire dataset including 11 countries and 24 worksites; random effects models were used to control for unique effects of worksites in these models. Table 4.2a below presents these regression analyses for each of the outcome variables.

The effects of age-related factors—age, career stage, and life stage—were tested separately, specifically for the India data. Dummy variables representing each of the worksites were used to control for unique effects of worksites in these models. Joint significance tests for groups of dichotomies representing each of the age-related factors were conducted to make decisions regarding statistical significance of a given age-related factor. Tables 4.2b through 4.2d below present these regression analyses for all the outcome variables.

Based on these regression models, we generated predicted values that are used to graphically illustrate the key findings in the main text. Predicted values were calculated at mean values of all other variables included in regression equations.

4.2.2 Missing Data

As with most surveys where responses are voluntary, the GOT dataset contained a significant amount of item non-response. To address concerns about missing data, we performed multiple imputation by chained equations (MICE),[1] as implemented in Stata 11 (the ICE package).[2] This technique involves predicting missing values on the basis of existing data using regression models; such imputation is done more than once, each time including a random component. Coefficient estimates from each of these multiple datasets are then averaged, and standard errors are combined using a special formula that incorporates the uncertainty of imputation into these errors. Given the fairly high proportion of missing data, we generated and used 20 sets of imputed data to ensure high efficiency of estimates.[3]

Thus, regression results presented in this report have been averaged across the 20 complete datasets using Stata's multiple imputation feature. Fully imputed values of our dependent variables (i.e., the three work outcomes) were deleted after multiple imputation (multiple imputation then deletion procedure, or MID);[4] however, we retained those values of work outcomes where only some but not all of the items used to create the scale were imputed.

4.2.3 Weights

As typically happens in survey research, some employees selected to participate in the GOT study chose not to participate. To minimize biases due to such refusals, all univariate and bivariate analyses presented in this report utilized post-stratification weights that were created using raking algorithm in Stata 11. These weights adjust sample distributions for each worksite to age, gender, and part-time/full-time status composition of that worksite. Compositional data were provided to us by representatives of each multinational organization. As our regression analyses used age, gender, and full-time/part-time status as independent variables, we did not use weights in multivariate analyses.

4.2.4 Additional Tables

Table 4.2a: Random Effects Regression Results for the Effects of Country on Work Outcomes

	Work Engagement	Job Satisfaction	Organizational Commitment
Female	-0.02	0.04*	-0.01
Undergraduate degree [a]	-0.22***	-0.08***	-0.17***
Graduate degree [a]	-0.28***	-0.14***	-0.23***
Income	-0.01	0.01	-0.01*
Lives with spouse/partner	0.07*	0.02	0.03
Work hours	0.01***	-0.00	-0.00
Part-time status	0.16	-0.03	0.18
Professional/technical [b]	-0.23***	-0.11***	-0.14***
Service/sales [b]	0.03	0.05	0.08
Other occupation type [b]	-0.19***	-0.08**	-0.04
Has supervisory responsibilites	0.17***	0.11***	0.11***
Age 30-39 years [c]	0.09	-0.05*	-0.06
Age 40-49 years [c]	0.33***	0.02	0.13**
Age 50 years + [c]	0.53***	0.15***	0.23***
Mid-career [d]	-0.08*	-0.08***	-0.06
Late career [d]	-0.35***	-0.19***	-0.16**
Child care responsibilities [e]	0.04	0.00	0.07*
Elder care responsibilities [e]	-0.01	-0.08**	0.00
Both child and elder care responsibilities [e]	0.04	-0.04	0.10
Working in "old-developed" countries [f]	-0.49	-0.15	-0.41
Working in "young-developing" countries [f]	0.03	-0.03	-0.03
Constant	5.58***	4.64***	4.81***

Statistically significant effects are indicated as follows: ***p<.001, **p<.01, *p<.05
[a] Reference = less than college; [b] Reference = managerial occupation; [c] Reference = under 30 years of age; [d] Reference = early career; [e] Reference = neither child nor elder care responsibilities; [f] Reference = working in India.

Table 4.2b: Ordinary Least Squares Regression Results for the Effects of Age on Work Outcomes in India

	Work Engagement	Job Satisfaction	Organizational Commitment
Female	-0.05	-0.12	-0.16
Undergraduate degree [a]	-0.55*	-0.14	-0.33
Graduate degree [a]	-0.24	-0.09	-0.17
Income	-0.04	0.02	-0.04
Lives with spouse/partner	0.01	-0.14	0.02
Work hours	0.00	-0.01	-0.01
Part-time status	0.89	0.68	1.07
Professional/technical [b]	-0.30	-0.02	-0.07
Service/sales [b]	-0.26	-0.08	0.07
Other occupation type [b]	0.01	0.38*	0.38
Has supervisory responsibilites	0.18	0.14	0.13
Age 30-39 years [c]	0.25	0.09	0.16
Age 40-49 years [c]	0.55*	0.10	0.31
Age 50 years + [c]	0.75*	0.32	0.55
Worksite 2 [d]	-0.14	-0.30**	-0.40**
Constant	5.93***	4.80***	5.45***

Statistically significant effects are indicated as follows: ***p<.001, **p<.01, *p<.05
[a] Reference = less than college; [b] Reference= managerial occupation; [c] Reference = under 30 years of age;
[d] Reference = worksite 1.

Note: The effects of age were graphically illustrated in the text only if the three age group dummies were jointly significant.

Table 4.2b-1: Differences in Work Engagement across the Age Groups

Age	Significant Difference (Work Engagement)
Under 30	Significantly different from 40-49 and 50+
30-39	No difference
40-49	Significantly different from under 30
50+	Significantly different from under 30

Table 4.2c: Ordinary Least Squares Regression Results for the Effects of Career Stage on Work Outcomes in India

	Work Engagement	Job Satisfaction	Organizational Commitment
Female	-0.04	-0.12	-0.17
Undergraduate degree [a]	-0.57*	-0.15	-0.32
Graduate degree [a]	-0.26	-0.10	-0.16
Income	-0.02	0.03	-0.04
Lives with spouse/partner	0.04	-0.12	0.02
Work hours	0.00	-0.01	-0.01
Part-time status	0.77	0.67	1.00
Professional/technical [b]	-0.33	-0.03	-0.06
Service/sales [b]	-0.27	-0.09	0.09
Other occupation type [b]	0.09	0.38*	0.43*
Has supervisory responsibilites	0.18	0.14	0.11
Mid-career [c]	0.22	0.02	0.30*
Late career [c]	0.43	0.31	0.58
Worksite 2 [d]	-0.12	-0.30**	-0.37**
Constant	5.92***	4.82***	5.36***

Statistically significant effects are indicated as follows: ***p<.001, **p<.01, *p<.05
[a] Reference = less than college; [b] Reference = managerial occupation; [c] Reference = early career;
[d] Reference= worksite 1.

Note: The effects of career stage were graphically illustrated in the text only if the two career stage dummies were jointly significant.

Table 4.2d: Ordinary Least Squares Regression Results for the Effects of Life Stage on Work Outcomes in India

	Work Engagement	Job Satisfaction	Organizational Commitment
Female	-0.02	-0.11	-0.15
Undergraduate degree [a]	-0.63**	-0.19	-0.40*
Graduate degree [a]	-0.30	-0.13	-0.22
Income	-0.02	0.02	-0.03
Lives with spouse/partner	0.01	-0.14	-0.03
Work hours	0.00	-0.01	-0.01
Part-time status	0.72	0.64	0.90
Professional/technical [b]	-0.37*	-0.04	-0.10
Service/sales [b]	-0.37	-0.14	0.00
Other occupation type [b]	0.04	0.38*	0.38
Has supervisory responsibilites	0.19	0.14	0.12
Child care responsibilities [c]	0.15	0.01	0.24
Elder care responsibilities [c]	-0.03	-0.17	-0.02
Both child and elder care responsibilities [c]	0.30	0.06	0.29
Worksite 2 [d]	-0.15	-0.33**	-0.41**
Constant	6.07***	4.92***	5.54***

Statistically significant effects are indicated as follows: ***p<.001, **p<.01, *p<.05
[a] Reference = less than college; [b] Reference = managerial occupation; [c] Reference = neither child nor elder care responsibilities; [d] Reference = worksite 1.

References

-INTRODUCTION-

1 McKinsey and Company (2010). How companies manage sustainability: McKinsey Global Survey results. *McKinsey Quarterly, March*. Retrieved from https://www.mckinseyquarterly.com/Surveys/How_companies_manage_sustainability_McKinsey_Global_Survey_results__2558

-SECTION 1-

1 Higo, M. & Williamson, J.B. (2011). Global aging. In R.A. Settersten & J.L. Angel (Eds.), *The handbook of sociology of aging* (pp.117-130). New York, NY: Springer.

2 US Census Bureau. (2010). International data base (IDB). Retrieved from http://www.census.gov/ipc/www/idb/country.php

3 United Nations. (2010). *UN data*. Retrieved from http://data.un.org/Default.aspx

4 OECD. (2010). *OECD factbook 2010: Economic, environmental and social statistics*. Paris: OECD. Retrieved from http://www.oecd.org/site/0,3407,en_21571361_34374092_1_1_1_1_1,00.html

5 International Labor Organization (ILO). (2010). Economically active population estimates and projections. Retrieved from http://laborsta.ilo.org/applv8/data/EAPEP/eapep_E.html

6 World Bank. (2010a). *World development indicators database*. Washington D.C. Retrieved from http://data.worldbank.org/indicator

7 Central Intelligence Agency (CIA). (2010). *The world factbook*. Washington D.C. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/fields/2048.html?countryCode=in&rankAnchorRow=#in

8 World Bank. (2010b). *Country classification*. Retrieved from http://econ.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20420458~isCURL:Y~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html

9 Bernanke, B. S. (2009, October, 19). *Asia and the global financial crisis.* Speech at the Federal Reserve Bank of San Francisco's Conference on Asia and the Global Financial Crisis. Retrieved from http://www.federalreserve.gov/newsevents/speech/bernanke20091019a.htm.

-SECTION 2-

1 Pitt-Catsouphes, M., Sweet, S., Lynch, K., & Whalley, E. (2009). *Talent management study: The pressures of talent management (Issue Brief No. 23)*. Chestnut Hill, MA: Sloan Center on Aging and Work at Boston College. Retrieved from http://agingandwork.bc.edu/documents/IB23_TalentMangmntStudy_2009-10-23.pdf

2 Kooij, D., De Lange, A., Jansen, P., & Dikkers, J. (2008). Older workers' motivation to continue to work: Five meanings of age. *Journal of Managerial Psychology, 23*(4), 364-394.

3 Super, D.E. (1990). A life-span, life-space approach to career development. In D. Brown & L. Brooks (Eds.). *Career choice and development: Applying contemporary theories to practice* (2nd ed.) (pp. 197-261). San Francisco, CA: Jossey-Bass.

4 Greenhaus, J. H., Callanan, G. A., & Godshalk, V. M. (2010). *Career management*. Thousand Oaks, CA: Sage Publications.

5 Pang, M., & Lee, C. (2002). Personal characteristics, career stage and job satisfaction. *International Journal of Employment Studies, 10*(1), 105-132.

6 Sweet, S., & Moen, P. (2006). Advancing a career focus on work and the family: Insights from the life course perspective. In M. Pitt-Catsouphes, E. E. Kossek & S. Sweet (Eds.), *The work and family handbook: Multi-disciplinary perspectives and approaches* (pp. 189-208). Mahwah, NJ: Lawrence Erlbaum Associates.

7 Pitt-Catsouphes, M., Kossek, E. E., & Sweet, S. A. (2006). *The work and family handbook: Multi-disciplinary perspectives, methods, and approaches*. Mahwah, NJ: Lawrence Erlbaum Associates.

8 Kossek, E. E., & Lambert, S. J. (2005). *Work and life integration: Organizational, cultural, and individual perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.

9 Elder, G. H., & Giele, J. Z. (2009). *The craft of life course research*. New York,NY: Guilford Press.

10 Lange, A. H. D., Taris, T. W., Jansen, P. G. W., Smulders, P., Houtman, I. L. D., & Kompier, M. A. J. (2006). Age as a factor in the relation between work and mental health: Results from the longitudinal TAS study. *Occupational Health Psychology: European Perspectives on Research, Education and Practice, 1*, 21-45.

11 Sterns, H.L., & Doverspike, D. (1989). Aging and the training and learning process. In I.L. Goldstein (Ed.), *Training and development in organizations* (pp. 299-332). San Francisco, CA: Joseey-Bass.

12 Sterns, H. L., & Miklos, S. M. (1995). The aging worker in a changing environment: Organizational and individual issues. *Journal of Vocational Behavior, 47*(3), 248-268.

13 Cleveland, J. N., & Shore, L. M. (1992). Self- and supervisory perspectives on age and work attitudes and performance. *Journal of Applied Psychology, 77*(4), 469-484.

14 Lawrence, B. S. (1988). New wrinkles in the theory of age: Demography, norms, and performance ratings. *Academy of Management Journal, 31*(2), 309-337.

15 Pfeffer, J. (1983). Organizational demography. *Research in Organizational Behavior, 5*, 299-357.

16 Marshall, V. W. (2007). Advancing the sociology of ageism. *Social Forces, 86*(1), 257-264.

17 Riley, M. W., Foner, A., & Riley, J. Jr. (1999). The aging and society paradigm. In V.L. Bengston & K. W. Schaie (Eds.), *Handbook of theories of aging* (pp. 327-342). New York, NY: Springer.

-SECTION 3-

1 Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement, 66*(4), 701-716.

2 Reichheld, F.F. (1996). *The loyalty effect: The hidden force behind growth, profits, and lasting value*. Boston, MA: Harvard Business School Press.

3 Wilkinson, A. (1998). Empowerment: theory and practice. *Personnel Review 27*(1), 40–56.

4 Klein, A.S., Masi, R.J., & Weidner, C.K. (1995). "Organization culture, distribution and amount of control, and perceptions of quality: An empirical study of linkages. *Group & Organization Management, 20*(2), 122-148.

5 Schneider, B., Henges, P.J., Smith, D.B., & Salvaggio, A.N. (2003). Which comes first: Employee attitudes or organizational financial and market performance? *Journal of Applied Psychology, 88*(5), 836-851.

6 Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1349). Chicago, IL: Rand McNally.

7 Cranny, C. J., Smith, P. C., & Stone, E. F. (1992). *Job satisfaction: how people feel about their jobs and how it affects their performance.* New York, MY: Lexington Press.

8 Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. Thousand Oaks, CA: Sage Publications.

9 Boyt, T. E., Lusch, R., & Naylor, G. (2001). The role of professionalism in determining job satisfaction in professional services, *Journal of Services Research, 4*, 321–330.

10 Bos, J. T., Donders, N. C. G. M., Bouwman-Brouwer, K. M., & Van der Gulden, J. W. J. (2009). Work characteristics and determinants of job satisfaction in four age groups: university employees' point of view. *International Archives of Occupational and Environmental Health, 82*(10), 1249–1259.

11 Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*, 376–407.

12 Wegge, J., Schmidt, K., Parkes, C., & van Dick, K. (2007). 'Taking a sickie': Job satisfaction and job involvement as interactive predictors of absenteeism in a public organization. *Journal of Occupational and Organizational Psychology, 80*, 77-89.

13 Jones, M. K., Jones, R. J., Latreille, P. L., & Sloane, P. J. (2009). Training, job satisfaction, and workplace performance in Britain: Evidence from WERS 2004. *Labour, 23*(s1), 139-175.

14 Rain, J.S., Lane, I.M., & Steiner, D.D. (1991). A current look at the job satisfaction/life satisfaction relationship: Review and future considerations. *Human Relations, 44*, 287–307.

15 Tait, M., Padgett, M. Y., & Baldwin, T. T. (1989). Job and life satisfaction: A reevaluation of the strength of the relationship and gender effects as a function of the date of the study. *Journal of Applied Psychology, 74*, 502–507.

16 Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations,*(2nd ed). Thousand Oaks, CA: Sage Publications.

17 Tsui, A. S., Egan, T. D., & O'Reilly, C. A., III. (1992). Being different: Relational demography and organizational attachment. *Administrative Science Quarterly, 37*(4), 549-580.

18 Hackman, J. R., & Oldham, G. R. (1976). Motivation through design of work. *Organizational Behaviour and Human Performance, 16*, 250–279.

19 Porter, L.W.,Crampon, W., & Smith, F. (1976). Organizational commitment and managerial turnover: A longitudinal study. *Organizational Behavior and Human Performance, 15*, 87-98.

20 Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14*, 224-247 as adapted in the GSS 1991.

21 McGee, G.W., & Ford, R.C. (1987). Two (or more?) dimension of organizational commitment: Reexamination of the affective and continuance commitment scales. *Journal of Applied Psychology, 72*(4), 638-641.

22 Somers, M.J. (1993). A test of the relationship between affective and continuance commitment using nonrecursive models. *Journal of Occupational and Organizational Psychology, 66*, 185-192.

23 Hackett, R.D, Bycio, P., & Hausdorf, P. A. (1994). Further assessments of Meyer and Allen's (1991) three-component model of organizational commitment. *Journal of Applied Psychology, 79*(1), 15-23.

24 Farzad, A., Nahavandi, N., & Caruana, A. (2008). The effect of internal marketing on organizational commitment in Iranian banks. *American Journal of Applied Sciences, 5*(11), 1480-1486.

25 Angle, H. L., & Perry, J. L. (1981). An empirical assessment of organization commitment and organizational effectiveness. *Administrative Science Quarterly, 26*, 1-13.

26 Angle, H.L. & Perry, J.L. (1983). Organizational commitment: Individual and organizational influences. *Work and Occupations, 10*, 123-146.

27 Lio, K. (1995). Professional orientation and organizational commitment among public employees: an empirical study of detention workers. *Journal of Public Administration Research and Theory, 5*, 231-246.

28 Sommer, S., Bae, S., & Luthans, F. (1996). Organizational commitment across cultures: The impact of antecedents on Korean employees. *Human Relations, 49*, 977-993.

29 Blau, G. J., & Boal, K. B. (1987). Conceptualizing how job involvement and organizational commitment affect turnover and absenteeism. *The Academy of Management Review, 12*(2), 288-300.

30 Lambert, S.D. (2002). *My HR network re-energizing your organization after layoffs, 2002.* Retrieved from http://www.nehra.com/attachments/articles/Reenergizing%20after%20layoffs.ppt

31 Marsden, P. V., Kalleberg, A. L., & Cook, C. R. (1993). Gender differences in organizational commitment: Influences of work positions and family roles. *Work and Occupations, 20*(3), 368-390.

-SECTION 4-

1 White, I.R., Royston, P., & Wood, A.M. (2011). Multiple imputation using chained equations: Issues and guidance for practice. *Statistics in Medicine, 30*(4), 377-399.

2 Royston, P. (2005). Multiple imputation of missing values: Update of ICE. *Stata Journal, 5*(4), 527-536.

3 Graham, J.W., Olchowski, A.E., & Gilreath, T.D. (2007). How many imputations are really needed? Some practical clarifications of multiple imputation theory. *Prevention Science, 8*, 206-213.

4 von Hippel, P. (2007). Regression with missing Y's: An improved strategy for analyzing multiple imputed data. *Sociological Methodology, 37*(1), 83-117.

ABOUT THE SLOAN CENTER ON AGING & WORK

Established in 2005, The Sloan Center on Aging & Work at Boston College promotes quality of employment as an imperative for the 21st century multi-generational workforce. We integrate evidence from research with insights from workplace experiences to inform innovative organizational decision-making. Collaborating with business leaders and scholars in a multi-disciplinary dialogue, the Center develops the next generation of knowledge and talent management.

Since our founding, we have conducted more than 20 studies in collaboration with employers, including the Age & Generations Study, the Talent Management Study, and the Generations of Talent Study. Current projects include the Assessing the Impact of Time and Place Management Study and the Engaged as We Age Study. The Sloan Center on Aging & Work is grateful for the continued support of the Alfred P. Sloan Foundation.

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Other Reports from the Generations of Talent Study Currently Available

Pitt-Catsouphes, M., Sarkisian, N., Carapinha, R., Bhate, R., Lee, J., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in Brazil*. Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Pitt-Catsouphes, M., Sarkisian, N., Carapinha, R., Bhate, R., Lee, J., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in China*. Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Sarkisian, N., Pitt-Catsouphes, M., Bhate, R., Carapinha, R., Lee, J., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in India*. Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Sarkisian, N., Pitt-Catsouphes, M., Lee, J., Bhate, R., Carapinha, R., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in Japan*. Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Sarkisian, N., Pitt-Catsouphes, M., Carapinha, R., Lee, J., Bhate, R., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in Mexico.* Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Pitt-Catsouphes, M., Sarkisian, N., Bhate, R., Lee, J., Carapinha, R., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in Spain.* Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Pitt-Catsouphes, M., Sarkisian, N., Lee, J., Carapinha, R., Bhate, R., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in the Netherlands.* Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Sarkisian, N., Pitt-Catsouphes, M., Lee, J., Carapinha, R., Bhate, R., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in the United Kingdom.* Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Sarkisian, N., Pitt-Catsouphes, M., Bhate, R., Lee, J., Carapinha, R., & Minnich, C. (December 2011). *Effects of Country & Age on Work Engagement, Job Satisfaction & Organizational Commitment Among Employees in the United States*. Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

Sarkisian, N., Pitt-Catsouphes, M., Lee, J., Bhate, R., & Besen, E. (December 2011). *Effects of "Old-Developed" versus "Young-Developing" Country Type and Age-Related Factors on Work Engagement, Job Satisfaction, and Organizational Commitment.* Chestnut Hill, MA: Sloan Center on Aging & Work at Boston College.

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