



# **LEADERSHIP COMPETENCIES FOR SUCCESSFUL CHANGE MANAGEMENT**

## **A Preliminary Study Report**

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## **1 INTRODUCTION**

### **1.1 Competencies in General**

A competence in general can be understood as the ability of an individual to activate, use and connect the acquired knowledge in the complex, diverse and unpredictable situations (Perrenoud, 1997, in Svetlik, 2005). Gruban (2003) defines competencies as the ability to use knowledge and other capabilities, necessary for successful and efficient accomplishment of an appointed task, transaction of work, goal realization, or performance of a certain role in the business process. Competencies encompass knowledge, expertise, skills, personal and behavioral characteristics, beliefs, motives, values, etc. They are behavioral records of the roles, which people perform in the work processes. To avoid terminological confusion, Ellström (1997; cited in Virtanen, 2000) distinguishes a competence from a qualification. He considers competence as an attribute of an employee referring to “a kind of human capital or a human resource that can be transformed into productivity” while qualification is understood as “requirements of a certain class of work tasks (a job)”.

### **1.2 Leadership Competencies**

Changes in organizations are more and more common. They appear at faster pace and employees are expected to be even more adaptable. Leaders play an important role in setting an example for all those values, behaviors and considerations expected from employees. Leaders have to achieve

that changes in an organization are accepted and implemented in a way resulting not only in better job performance but also in general understanding and satisfaction of all. Therefore, it is reasonable to set the expectations of key employees – what they should achieve and how they should behave in order to implement successful changes. In other words, which are the important leadership competencies for successful change management?

It is necessary to distinguish between leadership competencies in profit organizations and public (as well as not-for-profit) organizations. Nature of activity, context, orientation of work and the budget, to name only a few areas, cause certain distinctions in leadership competencies between these two groups. There is a lack of studies comparing leadership factors and skills relevant to profit, public, and not-for-profit organizations.

According to Bennis (1987; cited in Thach et al., 2007), there are a few leadership competencies that have been proven time and again as mandatory for effective leadership. These include the competency clusters of vision and goal-setting, interpersonal skills, self-knowledge and technical competence regarding the specifics of the business in which the leader works. In addition, commonly referenced competencies include: integrity/honesty, communication, technical competence, diversity consciousness, developing others, results-orientation, change management, interpersonal skills, problem-solving, decision making, political savvy, strategic/visionary thinking, customer focus, business skills, team leadership, influence skills, conflict management, more recently emotional intelligence, social and environmental responsibility, depending on the culture of the organization even humor and innovation (Trinka, 2004; cited in Thach et al., 2007; Spencer and Spencer, 1993; Employer's Organization, 2004; Guggenheimer and Szule, 1998; Breckenridge Consulting Group, 2004; OPM, 1992; Laszlo, 2003; Goleman, McKee and Boyatzis, 2002; Thompson, 1985). There appear to be minor differences in the not-for-profit and profit leadership competency models. Not-for-profit organizations tend to center around new competencies such as governance effectiveness, boardroom contribution, and service to community (Chait, Ryan and Taylor, 2004; cited in Thach et al., 2007). On the other hand, profit organizations tend to emphasize financial responsibility and accountability more than non-profit organizations. Public administration organizations tend to emphasize political savvy more, as well as physical health/endurance and building coalitions (Horey and Fallesen, 2003, cited in Thach et al., 2007; OPM, 1992).

Despite diverse definitions and different understanding, competencies can be understood as cognitive, functional and social abilities and skills, including all individual resources one can use for performing diverse tasks in various areas, gaining required knowledge and achieving good results. Every competency is based on a combination of mutually linked cognitive and practical skills, knowledge, motivation, orientation values, beliefs, emotions, and other social and behavioral components, applicable as a whole in an efficient activity (OECD, 2002; cited in Svetlik, 2005).

### **1.3 Competency Model**

A competency model was developed for this study (Figure 1), based on a comprehensive literature review. The model starts with the antecedents of competency development.

#### **1.3.1 Antecedents of Competencies Development**

An antecedent is here understood as a precondition for a leader's individual competency development. One of the purposes of this study is to find out to what extent a particular antecedent is actually associated with a particular leadership competency. Literature review identified various antecedents. However, our model includes the following antecedents:

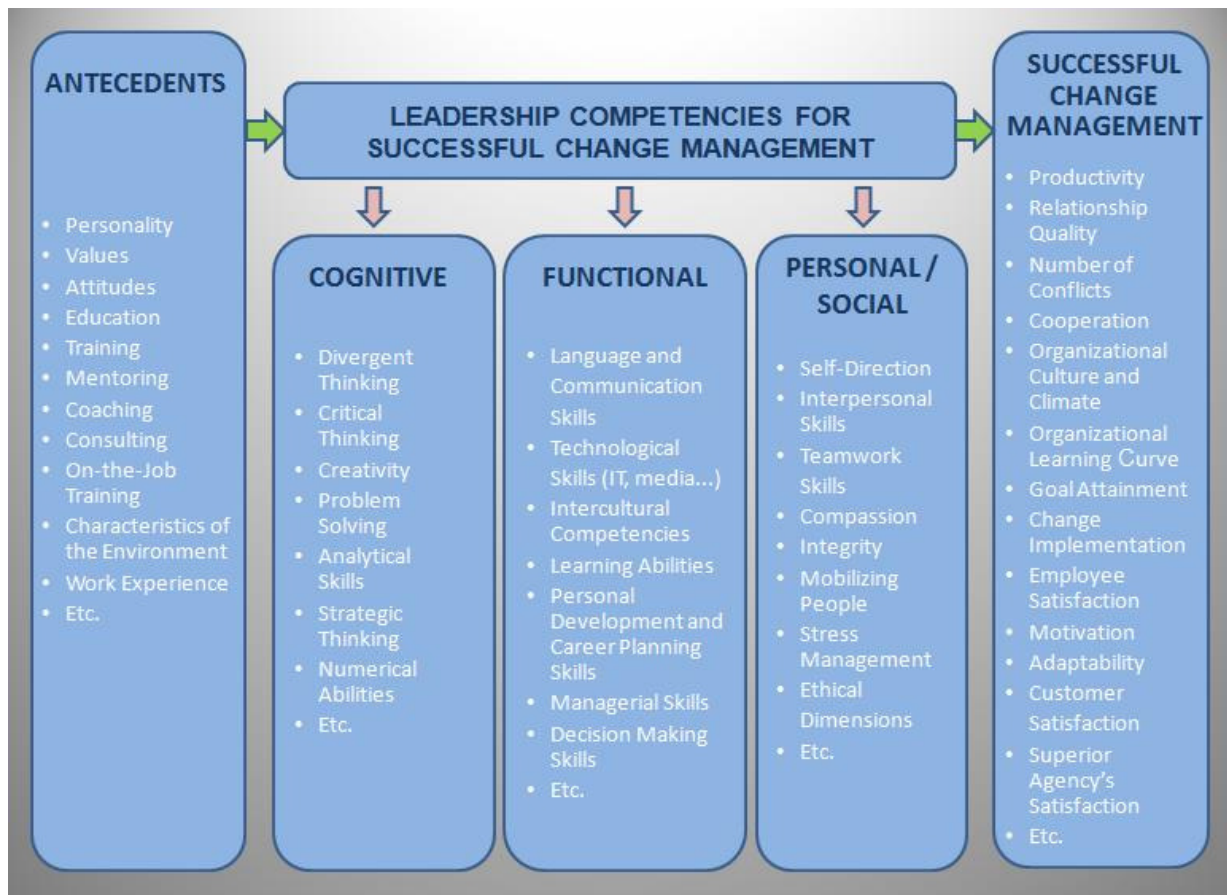
- Primary socialization,
- Work introduction,
- Consulting,
- Characteristic of the environment, and
- Work experience (Svetlik, 2005; Medveš, 2006).

In addition, other included antecedents are:

- Secondary socialization (education, friends) (Cugmas, 1991),
- Mentoring, coaching, and on-the-job training (Allio, 2005; Kim, 2007),
- Workshops, individual coaching sessions (Rappe and Zwick, 2007).

#### **1.3.2 Leadership Competencies**

Definition, understanding, and implementation of competencies for selected employees (the leaders in this case) are known as a “competency model”. This model has to be harmonized with a core philosophy of organization (its vision, mission, values, and goals).



**Figure 1 - Competency Model**

Virtanen (2000) explored the generic features of public managers. He presented a model of five competence areas: task competence, professional competence in substantive policy field, professional competence in administration, political competence and ethical competence (see Table 1). Furthermore, he uttered that much of previous research on managerial competence saw management as a generic profession and the differences between private and public sector were not directly addressed. Task and professional competence are in many ways the same for both sectors, but important differences exist in the areas of political and ethical competencies. In addition, the author argues that the organizational values in the public sector have been in transition, as the traditional values of public service in the Western democracies have been questioned by the imperatives of the new public management (NPM), emerging over the past twenty years.

In our model, we adopted a view of Medveš (2006), who claims that competencies are a conglomerate, consisting of three dimensions: cognitive, functional, and personal/social competencies.

Table 1: The competence areas of public managers

Criterion of competence	Contingencies of public service	Competence area Value area	Instrumental competence
<i>Task competence</i> Performance	Given goals and means Use of instruments	<i>Motivation</i>	<i>Abilities</i>
<i>Professional competence</i>			
<i>In subject area</i> Development of the policy object	Known selection of means, implicit goals Formation of instruments out of resources	<i>Control of the policy object</i>	<i>“Know-how” of the policy object</i>
<i>In administration</i> Development of policy execution	Specification of the policy goal Allocation of the resources	<i>Control of the policy program</i>	<i>“Know-how” of cooperation</i>
<i>Political competence</i> Legitimacy	Creation and authorization of the goal Creation and detachment of resources for the goal	<i>Ideology, interests</i>	<i>Possession of power</i>
<i>Ethical competence</i> Justification	Acceptability of the goal Acceptability of the resources and their instrumentalisation	<i>Morality</i>	<i>Argumentation</i>

Source: Virtanen (2000)

### 1.3.2.1 Cognitive competencies

Educational environment in an early age has tremendous impact on cognitive competencies development. Systematic knowledge generates cognitive competencies, including those concepts of spontaneous experiences at the implicit level of knowledge (Medveš, 2006). This dimension of competencies includes control of general principles, laws, theories and concepts. Particularly significant cognitive competencies include:

- Divergent thinking,
- Critical thinking,
- Creativity,
- Problem solving,
- Strategic thinking,
- Analytical skills, and
- Numerical abilities (Svetlik, 2005; Medveš, 2006).

### **1.3.2.2 Functional competencies**

Methodological knowledge generates functional competencies (Medveš, 2006). These competencies are qualifications and skills that an individual needs for every day problem solving or to perform a concrete activity. Particularly significant functional competencies include:

- Language and communication skills,
- Technological skills (IT, media etc.),
- Multicultural competencies (knowledge of a general and other cultures, foreign languages, etc.),
- Learning abilities and personal development,
- Career planning skills,
- Managerial skills, and
- Decision skills (Svetlik, 2005; Medveš, 2006).

In addition, other functional competencies are:

- International environment skills, and
- Globalization skills (Manning, 2003; May, 1997; Jokinen, 2005; Suutari, 2002; Harris, 2001).

### **1.3.2.3 Personal and social competencies**

The third dimension consists of competencies, which enable an individual to establish and maintain relationship with others:

- Self-direction,
- Interpersonal skills,
- Teamwork skills,
- Compassion,
- Integrity,
- Mobilizing skills,
- Personal and social values, and
- Ethical dimensions (Svetlik, 2005; Medveš, 2006).

Additional competencies include:

- Character, creativity and compassion (Allio, 2005).

### **1.3.3 The Outcome – Successful Change Management**

Successful change management is an important element of this study, as it represents a criterion for an individual competency assessment. Therefore, basic elements of change management have to be taken into consideration:

- How do organizations react to environmental changes and how they try to impact the environment
- How risky are the changes (the role of resilience and firmness)
- Change as a condition for basic capability planning in order to achieve success in the future
- Guided and unguided, planned and unplanned change of organization – a course and the extent of changes
- The meaning of right timing, when to start the change
- And last but not least, resistance to change and managing it.

Change in an organization can be very different. Lorenzi and Riley (2000) identify four types of changes, with the definite possibility of overlap among them:

- Operational changes, affecting the way the ongoing operations of the business are conducted
- Strategic changes, that occur in the strategic business direction
- Cultural changes, which affect the basic organizational philosophies by which the business is conducted
- Political changes, occurring in staffing primarily for political reasons of various types.

According to the OECD (2007), change management in public administration over the past three decades has been influenced by NPM ideas and techniques resulting in a cultural revolution in the public service (Table 2).

Table 2: Cultural transformation in government

Traditional Values	Instruments of Reform	New Cultural Values
Hierarchies of control Conformity Impersonality of work Authority through position Command-control paradigm	→ Citizens empowerment End of lifelong career Policy dialogue Normalization of employment condition Delegation of authority Performance-oriented focus Subtle leadership →	Accountability Openness Transparency Efficiency Effectiveness Authority through leadership Managerial culture

Source: OECD (2007)

Managing change from traditional values to new cultural values, as defined in Table 2, enables us to examine and assess successfulness of change management in a particular public administration institution. Outcome indicators, included in our model, are:

- Productivity,
- Relationship quality,
- Number of conflicts,
- Level of cooperation,
- Organizational culture and climate,
- Organizational learning curve,
- Goal attainment,
- Change implementation,
- Employee satisfaction,
- Motivation,
- Adaptability,
- Customer satisfaction, and
- Superior agency's satisfaction.



## 2 THE EMPIRICAL PART OF THE STUDY

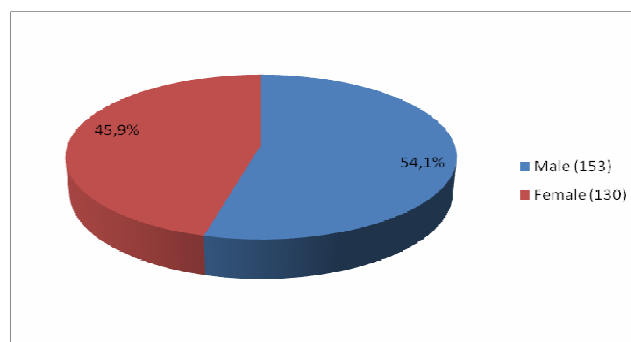
This part of the report describes the research conducted to test the competency model described above.

### 2.1 Sample

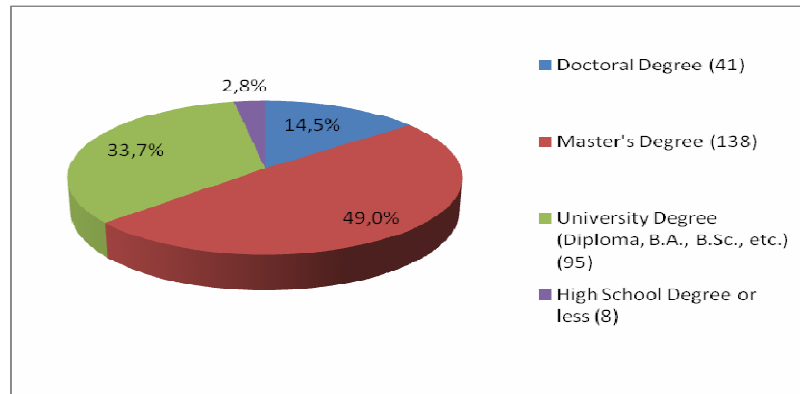
284 public administration managers completed an on-line survey. Those 284 participants were from the following countries (including the European Commission):

Country	No.	%	Country	No.	%
European Commission	2	0.70	Italy	3	1.06
Austria	9	3.17	Latvia	20	7.04
Belgium	4	1.41	Lithuania	6	2.11
Bulgaria	32	11.27	Luxembourg	6	2.11
Cyprus	17	5.99	Malta	14	4.93
Czech Republic	3	1.06	Netherlands	2	0.70
Denmark	2	0.70	Poland	16	5.63
Estonia	2	0.70	Portugal	16	5.63
Finland	3	1.06	Romania	0	0
France	6	2.11	Slovakia	15	5.28
Germany	8	2.82	Slovenia	12	4.23
Greece	7	2.46	Spain	3	1.06
Hungary	23	8.10	Sweden	36	12.68
Ireland	14	4.93	United Kingdom	3	1.06

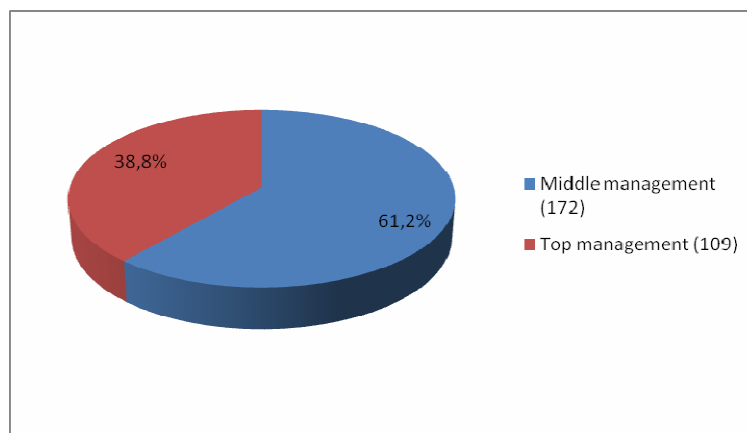
Among the participants, there were 153 (54%) males and 130 (46%) females and one person did not provide an answer to that question.



The mean age of the participants was 46.2 years. Sample included 41 (14.5%) people with a doctoral degree, 138 (49%) had a master's degree, 95 (33.7%) had a university degree, 8 (2.8%) participants had a high school degree or less, and 2 participants did not answer this question.



172 (61.2%) participants reported being in the rank of middle management, while 109 (38.8%) indicated the rank of top management, and 3 people did not indicate their rank.



The mean amount of work experience of the participants was 21.4 years, while the mean amount of work experience in PA was 16.5 years, and the mean amount of work experience at the current PA institution was 10 years. The mean amount of work experience in the current position was 3.6 years.

## 2.2 Questionnaire

Based on the model described in the introduction, we developed a questionnaire. We used several existing scales (The Big Five Factors of personality, Locus of Control, Terminal Values). In addition, based on the reviewed literature, we created scales for measuring the factors of training and environment, individual traits, competencies and successful change management.

There were the following sections and scales included in the questionnaire:

- Demographics:
  - Gender
  - Age
  - Country
  - Education
  - Job Title
  - Rank
  - Work Experience
  - Work Experience in Public Administration (PA)
  - Work Experience at the Current PA Institution
  - Work Experience in the Current Position
- Questions regarding:
  - Training
  - Mentoring
  - Coaching
  - Consulting
  - On-the-Job Training
  - Characteristics of the Environment
- Locus of Control:
  - Internality, Powerful Others, and Chance Scales (Levenson, 1981)
- Values:
  - Terminal Values from The Value Survey (Rokeach, 1967)
- Personal Characteristics / Traits:
  - Sample items – Ambitious, Broadminded, Courageous, Responsible, Ethical...

- Personality:
  - The Big Five Factors of Personality (the Mini IPIP Scales - Donnellan, Oswald, Baird, & Lucas, 2006); Factors – Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Intellect / Imagination (or Openness to Experience)
- Questions regarding:
  - Cognitive Competencies
  - Functional Competencies
  - Personal / Social Competencies
- Questions regarding the Indicators of Successful Change Management in a PA Institution, based on the OECD's framework, described earlier.

We performed factor analyses for the scales measuring competencies, successful change management, and individual characteristics.

Seven factors emerged when we performed factor analysis for the competency scale. We named them (shown with sample items):

- **People skills** (*I am very sensitive to others' needs and assumptions; I am very good in bringing out the best in people, etc.*)
- **Understanding, innovating and changing the organization** (*I have a talent for changing our PA institution's vision into reality; I thoroughly understand the need, goals, demands, and problems of our PA institution's constituents and clients, etc.*)
- **Emotional intelligence and self-control** (*I have great ability to understand and manage my emotions; I am able to integrate my emotions in my decision making, etc.*)
- **Planning and decision making** (*I always verify my assumptions before making a decision; When I face a problem, I take enough time to think before I attempt to solve it, etc.*)
- **Numbers and logic** (*I am very good at making complex decisions; I have a good sense for and understanding of numbers, etc.*)
- **Multicultural skills** (*I feel confident conducting a meeting in a foreign language; I participate effectively in multicultural teams, etc.*)
- **Learning and using new technologies** (*I am a quick learner; I am well versed in using a personal computer, etc.*).

We grouped them according to our model:

- Cognitive Competencies
  - Understanding, innovating and changing the organization

- Numbers and logic
- Functional Competencies
  - Planning and decision making
  - Multicultural skills
  - Learning and using new technologies
- Personal / Social Competencies
  - People skills
  - Emotional intelligence and self-control

When we factor analyzed the successful change management items, we got three factors, which we named:

- Traditional values (*Our PA institution relies heavily upon a strict hierarchy of control; In our PA institution, we value uniformity; personality should be kept out, etc.*)
- Fear and resistance to change (*Change led by our PA institution produces uncertainty and distrust due to lack of information; There is a high level of conflict within our PA institution, etc.*)
- New cultural values (*All important issues in our PA institution are openly discussed and shared with the public; Leadership of our PA institution is successful in transforming organizational culture, etc.*).

Only two factors emerged from the scale for the individual characteristics items. We named them:

- Personal traits (*Ambitious; Broadminded, Capable, etc.*)
- Gregarious traits (*Forgiving, Loving, Cheerful, Obedient, etc.*)

## 2.3 Results

Table 3 shows the means and standard deviations for the variables included in our study.

**TABLE 3**  
**Descriptive statistics<sup>a</sup>**

Items	Mean (scale 1-7)	Std. dev.
Training	4.14	0.90
Internality	5.26	0.64
Powerful others	3.41	0.84

Chance	3.33	0.82
Personal traits	5.82	0.59
Gregarious traits	5.31	0.76
Extraversion	4.01	1.05
Agreeableness	5.19	0.89
Conscientiousness	5.00	0.91
Neuroticism	3.86	1.01
Openness	5.00	0.95
Planning and decision making	5.15	0.74
People skills	5.16	0.72
Understanding, innovating, and changing the organization	5.31	0.71
Emotional intelligence and self-control	5.38	0.70
Multicultural skills	4.71	0.95
Numbers and logic	4.90	0.94
Learning and using new technologies	5.49	0.81
Traditional values	4.30	1.02
Fear and resistance to change	3.44	1.10
New values	4.54	0.95

<sup>a</sup> n = 284

### Gender, education, and rank comparisons

Analysis of variance revealed statistically significant gender differences, where females on average reported more extraversion and agreeableness, and males on average reported higher values for the numbers and logic items. There were no other statistically significant differences between females and males (Table 4).

**TABLE 4**  
**Results of ANOVA Analysis<sup>a</sup>**

Dependent variable: Gender

Variables:	Total		Males		Females		F
	Mean	SD	Mean	SD	Mean	SD	
Extraversion	4.01	1.05	3.85	0.96	4.19	1.11	7.05**
Agreeableness	5.19	0.89	5.08	0.89	5.34	0.88	5.76*
Numbers and logic	4.90	0.94	5.02	0.87	4.73	1.01	6.27*

<sup>a</sup> n = 284

\* p < .05

\*\* p < .01

Statistically significant differences also appeared for the education, where those with doctoral degree valued an exciting life higher than did those with university degree. Participants with master's degree valued happiness higher than did those with doctoral degree. Significant

differences occurred also with pleasure, which people with doctoral degree assessed as less important than did people with master's and university degrees. People with doctoral degree reported higher values for personal traits than did those with high school degree or less. Significant differences also appeared for multicultural skills, where people with doctoral degree reported having more of them than did those with university and high school degree. We also found that people with master's degree reported having more multicultural skills than did people with high school degree (Table 5).

**TABLE 5**  
**Results of ANOVA Analysis<sup>a</sup>**

Dependent variable: Education

Variables	Total		Doctoral Degree (1)		Master's Degree (2)		University Degree (3)		High School Degree or less (4)		F	Stat. signif. diff.
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
An exciting life	8.32	5.31	10.36	4.84	8.43	5.37	7.24	4.99	8.13	7.12	3.27*	1-3
Happiness	10.65	4.58	9.00	4.40	11.21	4.51	10.43	4.65	11.88	4.45	2.66*	1-2
Pleasure	7.03	4.40	5.03	3.41	7.16	4.89	7.74	3.85	7.25	3.28	3.62*	1-3, 1-2
Personal traits	5.82	0.59	5.99	0.42	5.84	0.68	5.77	0.46	5.34	0.81	2.85*	1-4
Multicultural skills	4.71	0.95	5.17	0.86	4.76	0.93	4.55	0.93	3.77	0.83	7.10*	1-3, 1-4, 2-4

<sup>a</sup> n = 284

\* p < .05

\*\* p < .001

We also performed analysis of variance for differences between the ranks. Statistically significant differences were found for training, where top managers reported higher values than did middle managers. Top managers valued a sense of accomplishment more, while middle managers valued a world of peace more. Top managers on average reported higher values for people skills, understanding, innovating, and changing the organization, emotional intelligence and self-control, numbers and logic, and new cultural values, but also reported lower values for fear and resistance than did their middle management counterparts (Table 6).

**TABLE 6**  
**Results of ANOVA Analysis<sup>a</sup>**

Dependent variable: Rank

Variables:	Total		Middle management		Top management		F
	Mean	SD	Mean	SD	Mean	SD	
Training	4.14	0.90	4.06	0.88	4.29	0.92	3.90*
A sense of accomplishment	9.52	4.87	8.96	4.80	10.30	4.88	4.95*
A world of peace	10.35	5.41	10.87	5.29	9.69	5.51	3.14*
People skills	5.16	0.72	5.06	0.79	5.32	0.57	7.56**
Understanding, innovating, and changing the organization	5.31	0.71	5.21	0.77	5.49	0.57	9.46**
Emotional intelligence and self	5.38	0.70	5.33	0.73	5.48	0.63	2.85*

control							
Numbers and logic	4.90	0.94	4.78	0.96	5.09	0.88	6.76**
Fear and resistance to change	3.44	1.10	3.59	1.14	3.19	0.98	8.49**
New values	4.54	0.95	4.34	1.01	4.86	0.75	17.52***

<sup>a</sup> n = 284      \* p < .05      \*\* p < .01      \*\*\* p < .001

### Correlations between competencies

Even though the factor analysis revealed seven distinct factors within the competency scale, a further correlation analysis revealed that all of those competencies were statistically significantly correlated, meaning that if a person has one set of competencies more developed, he or she has other competencies more developed, as well (Table 7).

**TABLE 7**  
**Correlations<sup>a</sup>**

Variables	1	2	3	4	5	6
1. Planning and decision making						
2. People skills	.49*					
3. Understanding, innovating, and changing the organization	.54*	.78*				
4. Emotional intelligence and self-control	.53*	.78*	.71*			
5. Multicultural skills	.39*	.55*	.46*	.53*		
6. Numbers and logic	.53*	.48*	.51*	.50*	.33*	
7. Learning and using new technologies	.30*	.47*	.43*	.41*	.48*	.40*

<sup>a</sup> n = 284      \* p < .001

### Stepwise regression analyses

First, we performed a stepwise regression analysis for those characteristics of the PA institutions associated with the traditional values. The analysis revealed that among all independent variables, planning and decision making had the greatest influence on the presence of traditional values, followed by chance, gregarious traits, multicultural skills (negative influence), inner harmony, work experience in PA (negative influence), powerful others, and gender (Table 8).



**TABLE 8**  
**Results of Stepwise Regression Analysis<sup>a</sup>**  
 (Dependent variable 'Traditional values')

Step	Variable entered	$\Delta R^2$	$R^2$	F	p
1	Planning and decision making	.2123	.2123	39.88	< .0001
2	Chance	.0843	.2965	17.60	< .0001
3	Gregarious traits	.0366	.3331	8.01	.0053
4	Multicultural skills (-)	.0306	.3637	6.97	.0092
5	Inner harmony	.0228	.3865	5.35	.0222
6	Total amount of work experience in PA (-)	.0188	.4053	4.52	.0351
7	Powerful others	.0177	.4230	4.35	.0387
8	Gender (-)	.0100	.4330	2.49	.1168

<sup>a</sup> n = 284

In other words, people with higher competencies for planning and decision making, who believe in chance and powerful others, who have more gregarious traits and value inner harmony more, who are of male gender and poses less multicultural skills, and who have less work experience in PA, are more likely to be found in PA institutions which were judged to be more traditional.

We then performed a stepwise regression analysis for characteristics of PA institutions associated with the new cultural values. The analysis revealed that training had the greatest influence on presence of the new cultural values, followed by emotional intelligence and self control, rank in the PA, sense of accomplishment, world of peace, highly regulated legal environment (negative influence), gregarious traits, planning and decision-making (negative influence), and numbers and logic (Table 9).

**TABLE 9**  
**Results of Stepwise Regression Analysis<sup>a</sup>**  
 (Dependent variable 'New values')

Step	Variable entered	$\Delta R^2$	$R^2$	F	p
1	Training	.2938	.2938	56.59	< .0001
2	Emotional intelligence and self-control	.0926	.3865	20.38	< .0001
3	Rank in PA	.0512	.4377	12.21	.0006
4	A sense of accomplishment	.0304	.4681	7.59	.0067
5	A world of peace	.0322	.5003	8.51	.0042
6	Highly regulated legal environment (-)	.0118	.5121	3.17	.0773
7	Gregarious traits	.0095	.5216	2.58	.1105
8	Planning and decision making (-)	.0139	.5355	3.86	.0515
9	Numbers and logic	.0109	.5464	3.08	.0815

<sup>a</sup> n = 284

This means that the participants, who have more training, who are more emotionally intelligent and have a higher rank in PA, who value a sense of accomplishment and the world of peace more, who work in a less regulated legal environment and have more gregarious traits, who have less competencies for planning and decision making, but more for numbers and logic, are more likely to be found in organizations with the new cultural values.

Finally, we conducted a stepwise regression analysis for characteristics of PA institutions associated with fear and resistance to change. Analysis revealed that among all independent variables, chance had the greatest influence on the estimated presence of fear and resistance. Chance was followed by sense of accomplishment (negative influence), rank in PA (negative influence), highly regulated legal environment, salvation, extraversion, social recognition (negative influence), emotional intelligence and self-control (negative influence), planning and decision-making, self-respect, training (negative influence), and increasing competition from the private sector (Table 10).

**TABLE 10**  
**Results of Stepwise Regression Analysis<sup>a</sup>**  
(Dependent variable 'Fear and resistance to change')

Step	Variable entered	$\Delta R^2$	$R^2$	F	p
1	Chance	.1041	.1041	17.31	< .0001
2	A sense of accomplishment (-)	.0737	.1778	13.27	.0004
3	Rank in PA (-)	.0265	.2043	4.89	.0285
4	Highly regulated legal environment	.0217	.2260	4.10	.0447
5	Salvation	.0157	.2603	3.06	.0823
6	Extraversion	.0160	.2763	3.16	.0777
7	Social recognition (-)	.0168	.2931	3.38	.0679
8	Emotional intelligence and self-control (-)	.0151	.3082	3.08	.0812
9	Planning and decision making	.0253	.3278	5.31	.0227
10	Self-respect	.0121	.3399	2.58	.1107
11	Training (-)	.0114	.3513	2.44	.1203
12	Competition from the private sector	.0153	.3666	3.32	.0705

<sup>a</sup> n = 284

This tells us that the participants who believe that events depend on chance, who do not value a sense of accomplishment and social recognition, who have lower rank in PA, who work in a highly regulated legal environment, who value salvation and self-respect more, who are more

extraverted, who have lower emotional intelligence and more competencies for planning and decision making, who have less training, and who experience greater competition from the private sector, are more likely to work in PA institutions with higher levels of fear and resistance to change.

While the findings of the stepwise regression analyses are interesting, they are less clear, as they represent an unstructured mixture of different variables. To introduce some more conceptual clarity, we performed several hierarchical regression analyses, where the researcher determines the order in which groups of variables are entered in a model.

### Hierarchical regression analyses

Table 11 shows the results of hierarchical regression analysis for dependent variable “Traditional values.”

**TABLE 11**  
**Results of Hierarchical Regression Analysis<sup>a</sup>**

Dependent variable: Traditional values

	$R^2$	$\Delta R^2$	F
<b>Functional competencies</b>	$R^2 = .25$	$\Delta R^2 = .25$	$F = 16.20^{****}$
Planning and decision making	$\beta = .55^{****}$		
Multicultural skills	$\beta = -.24^{**}$		
Learning and using new technologies	$\beta = .07$		
<b>Personal / Social competencies</b>	$R^2 = .26$	$\Delta R^2 = .01$	$F = 0.68$
<b>Cognitive competencies</b>	$R^2 = .27$	$\Delta R^2 = .01$	$F = 1.41$
Understanding, innovating, and changing the organization	$\beta = -.22^*$		
Numbers and logic	$\beta = .01$		
<b>Training</b>	$R^2 = .27$	$\Delta R^2 = .001$	$F = 0.23$
Training	$\beta = -.04$		
<b>Terminal values (only significant shown)</b>	$R^2 = .36$	$\Delta R^2 = .09$	$F = 1.06$
A sense of accomplishment	$\beta = -.25^{**}$		
A world of beauty	$\beta = -.17^*$		
Equality	$\beta = -.17^*$		
<b>Individual traits</b>	$R^2 = .40$	$\Delta R^2 = .04$	$F = 3.44^{**}$
Personal traits	$\beta = -.11$		
Gregarious traits	$\beta = .34^{**}$		
<b>Locus of control</b>	$R^2 = .47$	$\Delta R^2 = .07$	$F = 5.54^{***}$
Internality	$\beta = .06$		
Powerful others	$\beta = .20^{**}$		
Chance	$\beta = .14^*$		
<b>The Big 5 Factors of Personality (only sig. shown)</b>	$R^2 = .49$	$\Delta R^2 = .02$	$F = 0.89$
Agreeableness	$\beta = .19^*$		
<b>Demographics</b>	$R^2 = .51$	$\Delta R^2 = .02$	$F = 0.60$
<b>Environment</b>	$R^2 = .52$	$\Delta R^2 = .01$	$F = 1.04$

<sup>a</sup> n = 284

\* p < .15

\*\* p < .05

\*\*\* p < .01

\*\*\*\* p < .001

As can be seen from Table 11, personal / social competencies, training, demographics, and characteristics of the environment did not significantly explain any variance in the dependent variable ‘traditional values.’ On the other hand, this variance was significantly explained by planning and decision making skills, multicultural skills (negative influence), understanding, innovating, and changing the organization (negative influence), as well as the importance of the following values: a sense of accomplishment, a world of beauty, and equality (all these values had a negative influence). Furthermore, the variance was also significantly explained by gregarious traits, a belief that life is determined by chance and powerful others, as well as agreeableness. Taken together, these variables explain more than half (52%) of variance in ‘traditional values.’

Table 12 shows the results of hierarchical regression analysis for dependent variable “Fear and resistance to change.”

**TABLE 12**  
**Results of Hierarchical Regression Analysis<sup>a</sup>**

**Dependent variable: Fear and resistance to change**

<b>Functional competencies</b>	<b>R<sup>2</sup> = .05</b>	<b>ΔR<sup>2</sup> = .05</b>	<b>F = 2.58*</b>
Planning and decision making	β = .23**		
Multicultural skills	β = -.19*		
Learning and using new technologies	β = .02		
<b>Personal / Social competencies</b>	<b>R<sup>2</sup> = .08</b>	<b>ΔR<sup>2</sup> = .03</b>	<b>F = 2.26*</b>
People skills	β = .08		
Emotional intelligence and self control	β = -.26*		
<b>Cognitive competencies</b>	<b>R<sup>2</sup> = .11</b>	<b>ΔR<sup>2</sup> = .03</b>	<b>F = 2.24*</b>
Understanding, innovating, and changing the organization	β = -.29**		
Numbers and logic	β = -.04		
<b>Training</b>	<b>R<sup>2</sup> = .12</b>	<b>ΔR<sup>2</sup> = .01</b>	<b>F = 2.96*</b>
Training	β = -.14**		
<b>Terminal values (only significant shown)</b>	<b>R<sup>2</sup> = .27</b>	<b>ΔR<sup>2</sup> = .15</b>	<b>F = 1.47*</b>
A sense of accomplishment	β = -.32***		
<b>Individual traits</b>	<b>R<sup>2</sup> = .27</b>	<b>ΔR<sup>2</sup> = .001</b>	<b>F = 0.40</b>
<b>Locus of control</b>	<b>R<sup>2</sup> = .33</b>	<b>ΔR<sup>2</sup> = .06</b>	<b>F = 3.39**</b>
Internality	β = -.00		
Powerful others	β = .08		
Chance	β = .21**		
<b>The Big 5 Factors of Personality (only sign. shown)</b>	<b>R<sup>2</sup> = .36</b>	<b>ΔR<sup>2</sup> = .03</b>	<b>F = 1.10</b>
Extraversion	β = .19**		
<b>Demographics</b>	<b>R<sup>2</sup> = .38</b>	<b>ΔR<sup>2</sup> = .02</b>	<b>F = 0.50</b>
<b>Environment</b>	<b>R<sup>2</sup> = .42</b>	<b>ΔR<sup>2</sup> = .04</b>	<b>F = 3.12**</b>
Highly regulated legal environment	β = .23**		
Increasing competition from the private sector	β = .11		

<sup>a</sup> n = 284

\* p < .15

\*\* p < .05

\*\*\* p < .01

\*\*\*\* p < .001

As can be seen from Table 12, individual traits and demographics did not significantly explain any variance in the dependent variable ‘fear and resistance to change.’ On the other hand, this variance was significantly explained by planning and decision making skills, multicultural skills (negative influence), emotional intelligence and self-control (negative influence), understanding, innovating, and changing the organization (negative influence), training (negative influence), a sense of accomplishment (negative influence), a belief in the importance of chance, extraversion, and highly regulated legal environment. Taken together, these variables were able to explain 42 percent of variance in ‘fear and resistance to change.’

Table 13 shows the results of hierarchical regression analysis for dependent variable “New cultural values.”

**TABLE 13**  
**Results of Hierarchical Regression Analysis<sup>a</sup>**

**Dependent variable: New cultural values**

<b>Functional competencies</b>	<b>R<sup>2</sup> = .10</b>	<b>ΔR<sup>2</sup> = .10</b>	<b>F = 5.11***</b>
Planning and decision making	β = .09		
Multicultural skills	β = .23**		
Learning and using new technologies	β = .06		
<b>Personal / Social competencies</b>	<b>R<sup>2</sup> = .22</b>	<b>ΔR<sup>2</sup> = .12</b>	<b>F = 10.04****</b>
People skills	β = .35**		
Emotional intelligence and self control	β = .17		
<b>Cognitive competencies</b>	<b>R<sup>2</sup> = .25</b>	<b>ΔR<sup>2</sup> = .03</b>	<b>F = 2.71*</b>
Understanding, innovating, and changing the organization	β = .22*		
Numbers and logic	β = .16*		
<b>Training</b>	<b>R<sup>2</sup> = .42</b>	<b>ΔR<sup>2</sup> = .17</b>	<b>F = 37.24****</b>
Training	β = .44****		
<b>Terminal values (only significant shown)</b>	<b>R<sup>2</sup> = .54</b>	<b>ΔR<sup>2</sup> = .12</b>	<b>F = 1.74**</b>
A sense of accomplishment	β = .26**		
A world of peace	β = .17*		
<b>Individual traits</b>	<b>R<sup>2</sup> = .55</b>	<b>ΔR<sup>2</sup> = .01</b>	<b>F = 0.89</b>
<b>Locus of control</b>	<b>R<sup>2</sup> = .55</b>	<b>ΔR<sup>2</sup> = .001</b>	<b>F = 0.38</b>
<b>The Big 5 Factors of Personality</b>	<b>R<sup>2</sup> = .56</b>	<b>ΔR<sup>2</sup> = .007</b>	<b>F = 0.31</b>
<b>Demographics (only significant shown)</b>	<b>R<sup>2</sup> = .61</b>	<b>ΔR<sup>2</sup> = .05</b>	<b>F = 1.42</b>
Rank in PA	β = .18**		
<b>Environment</b>	<b>R<sup>2</sup> = .61</b>	<b>ΔR = .002</b>	<b>F = 0.82</b>

<sup>a</sup> n = 284

\* p < .15

\*\* p < .05

\*\*\* p < .01

\*\*\*\* p < .001

As can be seen from Table 13, individual traits, locus of control, personality, and characteristics of the environment did not significantly explain any variance in the dependent variable ‘new cultural values.’ At the same time, this variance was significantly explained by multicultural skills, people skills, understanding, innovating, and changing the organization, numbers and logic, training, the importance of a sense of accomplishment and a world of peace, as well as the

rank in PA. Taken together, these variables explained 61 percent of variance in ‘new cultural values.’

### Correlation analysis for the outcome variables

Finally, we investigated the correlations among the outcome variables, namely ‘traditional values,’ ‘fear and resistance to change,’ and ‘new cultural values’ (Table 14).

**TABLE 14**  
**Correlations among the Outcome Variables<sup>a</sup>**

Variables	1	2
1. Traditional values		
2. Fear and resistance to change	.32**	
3. New values	-.16*	-.60**

<sup>a</sup> n = 284      \* p < .05      \*\* p < .001

As expected, there is a significant negative correlation between traditional and new cultural values. The more the traditional values are present, the less the new cultural values exist in a certain PA institution, and vice versa.

A significant positive correlation exists between traditional values and fear and resistance to change. The more the traditional values exist in a certain PA institution, the more fear and resistance to change exist in this institution, and vice versa.

And finally, a significant negative correlation exists between new cultural values and fear and resistance to change. The more the new cultural values exist in a PA institution, the less fear and resistance to change exist in this institution, and vice versa. This correlation is the strongest among all three.

## 2.4 Conclusion

The results indicate the following:

- Traditional values and new cultural values coexist in PA institutions; they are negatively correlated.

- Traditional values are positively correlated with fear and resistance to change; new cultural values are negatively correlated with fear and resistance to change.
- Traditional values are positively associated with planning and decision-making skills, beliefs in powerful others and chance, agreeableness and gregarious traits. They are negatively associated with multicultural skills, understanding, innovating and changing the organization, as well as with appreciation of a sense of accomplishment, world of beauty, and equality.
- Fear and resistance to change are positively associated with planning and decision-making skills, beliefs in chance, as well as with extraversion and highly regulated environment. They are negatively associated with multicultural skills, emotional intelligence and self-control, understanding, innovating and changing the organization, training, as well with appreciation of a sense of accomplishment.
- New cultural values are positively associated with multicultural and people skills, understanding, innovating and changing the organization, numbers and logic skills, rank in PA, as well as with appreciation of a sense of accomplishment and world of peace, but—above all—with training.

The results stress the importance of the following competencies:

- Multicultural skills
- Understanding, innovating and changing the organization
- Emotional intelligence and self-control
- People skills.

Planning and decision-making skills were associated with traditional values and with fear and resistance to change.

The results also stress the importance of the locus of control, especially the beliefs in powerful others and chance (and their association with traditional values and fear and resistance to change).

One of the very important findings was that training has positive effects above and beyond its impact upon the competencies.

These results emphasize the significance of implementing new cultural values into the PA institutions. They indicate that replacing the old values with the new values in PA institutions can be achieved by proper training, mentoring and on-the-job training, emotional intelligence and self-control, a proper mind-set of managers (especially the internal locus of control and appreciation of a sense of accomplishment), multicultural skills, and competencies for numbers and logic.

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