

Economic Resourcefulness of Leaders Across Cohorts

Maria Piotrowska

Wroclaw University of Economics, Poland

— *Review of* —
**Integrative
Business &
Economics**
— *Research* —

ABSTRACT

A paper considers how formal leaders - the appointed chiefs or managers of an administrative unit - act and use their leadership skills as leaders of their households. The household heads are responsible for economic security of their family. A leader with her/his traits is expected, as a head/member of her/his household, to make the right economic decisions in private life to ensure a high level of economic security for own family. The paper is aimed to investigate whether leaders prove to be more resourceful than other household heads, it means whether their private, economic decisions - in the fields of labor, saving, investing, borrowing and insuring - make their households more secure economically. The questionnaire survey is a source of data for observed variables. The sample covers 800 respondents in age 25-64. The sample is divided into three cohorts which have different experiences resulted from transition process in Poland (1990-2003), Poland's membership in the EU (since 2004), the financial crises in 2008-2010. The research uses an exploratory analysis based on structural equation modeling (SEM). The results from the exploratory analysis show that private economic decisions made by leaders build higher economic security of their households

Keywords: resourcefulness, economic security, leader

1. INTRODUCTION

The household heads are responsible for economic security of their family. A paper considers formal leaders - the appointed chiefs or managers of an administrative unit - as leaders of their households. The research is aimed to find answers to main questions: 1) Do leaders prove to act more reasonably than other household heads? 2) Is economic security of leaders' households at visibly higher level than economic security of nonleaders' households?

A leader with her/his traits is expected, as a head/member of her/his household, to make the right economic decisions in private life to ensure a high level of economic security for own family. These private economic decisions refer to saving in a short and long run, running up debts, gaining additional money to protect a family against adverse situations, insurance purchase.

The paper extends studies of leadership by introducing a concept of economic resourcefulness with reference to leaders. Economic resourcefulness of a household is defined in the paper as capability of a head and other members of a household to make

economic decisions which contribute to economic security of a household. It is assumed that economic security is not guaranteed only by a simple sum of income and assets but it also depends, to a large extent, on economic resourcefulness of a household.

The research uses an exploratory analysis based on structural equation modeling (SEM) implemented by IBM SPSS Amos. The questionnaire survey is a source of data for observed variables. The sample covers 800 respondents in age 25-64. The sample is divided into three cohorts which have different experiences resulted from transition process in Poland (1990-2003), Poland's membership in the EU (since 2004), the financial crises in 2008-2010.

The structure of the paper is as follows: the second section offers a literature survey; the third one presents the research design and the methods; the fourth one covers the discussion on findings, finally conclusions.

2. LITERATURE SURVEY

The research presented in the paper is not a typical study on leadership. It is not aimed at finding out a set of leader traits, the most effective behavior patterns of leaders, leadership styles, leadership criteria and leadership models. In the paper formal leaders are investigated as private persons who make private economic decisions that contribute to economic security of their households. The question is whether these leaders are "better" in such decisions and their families are more economically secure than families of nonleaders. The trait-based perspectives of leadership seem to be a proper background for the research such designed.

Zaccaro (2007, pp.7-8)) defines leader traits "as relatively coherent and integrated patterns of personal characteristics, reflecting a range of individual differences that foster consistent leadership effectiveness across a variety of group and organizational situations" (see also Zaccaro et al., 2004, p. 104). Zaccaro (2007, p.8) draws attention to three key components of this definition. First, leader traits should be considered as integrated constellations of attributes that influence leadership performance. Second, qualities that differentiate leaders from nonleaders include not only personality attributes but also motives, values, cognitive abilities, social and problem-solving skills, and expertise (see also Yukl, 2006). The question of whether the leader attributes predicting leader emergence differ from those predicting leader effectiveness is taken no account in this paper. The third component in the definition of leader traits, mentioned above, specifies leader attributes as relatively enduring, producing cross-situational stability in leadership performance. However, Zaccaro (2007) does not minimize the importance of the leader's situation. Some individual differences, for example, leadership skills and expertise, are more related to situational requirements. Advocates

of the trait-based perspectives of leadership accept that individuals with particular kinds of skills and expertise can be leaders in one situation but not in others, however simultaneously, they point at a set of traits and attributes of a leader that extend an ability of an individual to adjust and change her/his behavior as the situation changes. Thus set of traits and attributes covers cognitive complexity, cognitive flexibility, metacognitive skills, social intelligence, emotional intelligence, adaptability, openness, tolerance for ambiguity (Boal and Whitehead, 1992; Kozlowski, Gully, Salas and Cannon-Bowers, 1996; McCrae and Costa, 1987, 1990, Ployhart and Bliese, 2006; Streufert and Swezey, 1986; Zaccaro, 2001, 2002). Zaccaro (2007, p.10) concludes that this point of view allows to construct a model of leadership which “can account for both the importance of situational parameters as the primary source of variance in leadership behavior (i.e., what the leader does) and the importance of traits as the primary source of variance in leader role occupancy (i.e., who the leader is)”.

In the paper is assumed that situational influences can be revealed in a context of changes in performance requirements across organizational levels. Certain organizational variables, like a degree of formalization, types of structure, and support for innovation can alter the importance of particular traits and trait patterns (Hunt, 1991; Zaccaro, 2001). However, investigating how context shapes the performance requirements for leaders and how attributes of leaders promote consistent effectiveness across varying organizational requirements is beyond the scope of this paper.

Recently the role of development in shaping growth in leader attributes and leadership capacity has attracted more attention (Day, 2000; Day, Zaccaro, and Halpin, 2004; McCauley, and Van Velsor, 2004; Mumford, Marks, Connelly, Zaccaro, and Reiter-Palmon, 2000; Zaccaro and Banks, 2004; Zaccaro et al., 2006). Zaccaro (2007, p. 13) concludes that more empirical studies are needed to examine what training strategies are most suited for such leader attributes like expertise, tacit knowledge, problem solving skills and social appraisal skills. He emphasizes simultaneously that certain personal attributes promote how leaders learn and grow from experience.

3. RESEARCH DESIGN

3.1. ASSUMPTIONS DRAWN FROM THEORIES

The research is based on four assumptions drawn from the trait-based perspectives of leadership. First, there is a set of leader traits and attributes that can differentiate leaders from nonleaders. Second, persons who emerge as leaders in one situation also emerge as leaders in qualitatively different situations. Third, development plays an important role in shaping growth in leader attributes. Forth, organization can influence

contribution of particular traits and trait patterns.

In the paper it is assumed that formal leaders - the appointed chiefs or managers of an administrative unit – use their leader traits and attributes in making private economic decisions. It is possible to identify the differences in these decisions not only between leaders and nonleaders but also between leaders and other high-performing individuals. The traits and attributes of the leaders investigated in the research have been shaped by socio-economic development, and as a consequence there are the differences in making private economic decisions between different cohorts of leaders.

Organizational differences between private and public sectors matter for leader qualities required in each sector.

3.2. OBJECTIVES AND HYPOTHESES

Resourcefulness proves to be the main concept of the research. It is defined as a set of family member capabilities of economic decision making aimed at ensuring economic security of her/his family. A family can be regarded economically secured when it is able to satisfy its needs at the satisfactory level and has assets or means letting it to survive unfavorable circumstances.

The resourcefulness concept is a logical explanation of the perception of economic security. It differs from concepts such as creativity (the ability to perceive the world in new ways, to find hidden patterns, to make connections between seemingly unrelated phenomena, and to generate solutions) and resiliency (the capacity to recover quickly from difficulties). Ensuring family economic security does not require creativity but resourcefulness – the capability of finding good job and building-up resources which protect the family against inverse events. The resourcefulness has to protect the family against falling into difficulties so it cannot be identified with the concept of resiliency.

The paper is aimed to investigate whether leaders prove to be more resourceful than other household heads, it means whether their private, economic decisions- in the fields of labor, saving, investing, borrowing and insuring - make their households more secure economically.

The objective is to compare resourcefulness of leaders and nonleaders among and across three cohorts. Cohorts are distinguished by common educational and professional experiences, controlling for economy conditions. The economic context covers: the beginning of transition in Poland (1990), Poland's accession to the EU (2004) and the beginning of financial crisis (2008). Respondents investigated in the questionnaire survey conducted in 2013 have been educated during different stages of transition in Poland and they differed in their job experiences. Investigating resourcefulness of

leaders across cohorts reflects the assumption that the traits and attributes of the leaders have been shaped by socio-economic development.

The research verifies the following hypotheses:

1. Economic resourcefulness of leaders is at higher level than resourcefulness of other individuals in the cohort. If yes, the size of the differences between resourcefulness of leaders and nonleaders is different across cohorts.
2. Social backgrounds generate differences in economic resourcefulness of leaders across cohorts.
3. Economic resourcefulness of leaders in a private sector is higher than in a public sector.

3.3. COHORT-SEQUENTIAL DESIGN WITH INDEPENDENT SAMPLES

The accomplishment of the research aim requires proper design of the study. There are two constraints to consider: 1) in a simple comparison of persons who are at different ages at one point in time (cross-sectional data), age effects may be confused with cohort effects and 2) unfortunately in Poland there are no available longitudinal data connected with the paper scope.

The lack of longitudinal data implies a lack of information about personal developmental changes what it neglects the possibility to reveal cohort effects and age effects. The cohort effect is defined as the effect that having been born in a certain time, region, period or having experienced the same life experience (in the same time period) has on the development or perceptions of a particular group. These perceptions, characteristics or effects are unique to the group in question. In other words, a birth cohort experiences the same historical, social, and environmental events at the same age, potentially giving rise to unique, cohort-specific values, attitudes, and preferences. Age effects are variations resulting from the biological and social processes of aging specific to individuals, such as physiological changes and the buildup of social experience .

The solution which can reduce the single cross section studies limitation is cohort-sequential design with independent samples. Admittedly such a design does not give full information on intra-individual change and inter-individual differences across generations. However, cohort-sequential design with independent samples allows to differentiate cohort differences and age differences controlling for history (Schaie, 1994, p.51).

It is assumed the basis of personality is created until the age of 6 then the period of cohort feature creation follows and covers the age of 6–20 . Between 15 and 20 the phase of cohort signal identification occurs thus the common cohort value pattern is formed.

The socio-economic context for differentiation of cohorts is connected with economic and social changes in Poland during transition from a central planned economy under the communistic regime to a market economy. The first stage of transition took place in the 90s, the second one covered the years 2000-2004 and it was aimed at the ultimate preparation of Poland to the EU accession in 2004. Since 2005 Poland has developed in a direction of an advanced market economy, although it still belongs to a group of emerging markets. The transition has resulted in three great changes in the economy and the society: 1) dynamic growth of private sector, (a contribution of the private sector to the GDP is dominate, small and medium size enterprises create the majority of jobs), 2) openness of the economy (FDI growth, high technology, the western style of management not only in foreign firms but also in domestic ones, two millions of Poles have found jobs abroad), and 3) very dynamic growth in a fraction of high educated people (a number of people in age of 25-64 with a tertiary level of education increased from 10% in 1995 to 22% in 2011 as well a number of mothers with a tertiary educational level increased from 6% at the beginning of the 90s to more than 47% in 2013 while a number of mothers with primary education/or even without any educational level attained declined in this period from 18% to 4%).

The research covers three samples of respondents which represent three cohorts named (see Table 3.1):

Cohort 1: “Children of transition” – respondents are characterized as follows: all levels of education attained in a market economy, possibilities to study in the EU, difficult entry to the labor market after the financial crisis, professional training in an advanced market economy (“an advanced market economy” in comparison to the first stage of transition, not in comparison to the old members of the EU) ;

Cohort 2: “Youth of transition” – respondents are characterized as follows: secondary and tertiary levels of education in a market economy, easy entry to the labor market just after Poland’s transition to the EU (dynamic growth during 2005-2007), extended professional experiences and more or less stable professional carrier during the financial crisis ;

Cohort 3: “Mobile-working-age-adults of transition” – respondents are characterized as follows: childhood in the communism time, all educational levels in the communism times, professional experiences achieved in the communism times, training at the first stage of transition, stable professional position during the financial crisis.

Table 3.1. Cohort-sequential design

Economic context		1990	2004	2008	2013
		Beginning of transition in Poland	Poland's accession to the UE	Beginning of financial crisis	Year of questionnaire survey (advanced market economy in comparison to the first stage of transition)
Cohort 1 „Children of transition”	Age of respondents	2-11	16-25	20-29	25-34
	Educational level/job experiences	Primary school	secondary school/ university/first job	first job/or university	first professional training/ the beginning of professional carrier
Sample 2 „Youth of transition”	Age of respondents	12-21	26-35	30-39	35-44
	Educational level/job experiences	secondary school/ first job/or the beginning of university study	First job/ first professional training/ the beginning of professional carrier	Professional experiences extended	Stable professional position (mobile-working-age)
Sample 3 „Mobile-working-age-adults of transition”	Age of respondents	22-41	36-55	40-59	45-64
	Educational level/job experiences	Education in communism times / first job/ professional experiences achieved in communism	Professional experiences extended (training mostly during the first stage of transition))	Stable professional position	Stable professional position (immobile-working-age)

		times			
--	--	-------	--	--	--

Source: Author’s proposal

3.4. METHODS

3.4.1. DATA

The questionnaire survey is a source of data for observed variables. The survey was carried out by the professional polling agency in Poland in June 2013. The respondents were asked to express their opinions directly in the course of face-to-face interviews. The polling agency carrying out the survey has chosen respondents at random. The selection of the respondents had been representative due to the voivodship (Poland is divided into 16 administrative units called voivodships), age, gender and educational level attained.

3.4.2. SUB-SAMPLES

The whole sample covers 800 respondents in age between 25 to 64. This sample is divided into three cohorts.

In each cohort a group of leaders covers the appointed chiefs (respondents recognize themselves as managers of an administrative unit) and the owners of small and medium size enterprises (SME). The appointed chiefs are divided into those working in a private sector and those employed in a public sector. Therefore, findings from a structural equation model (SEM) estimated for a given cohort are discussed for the following sub-samples:

- all leaders in the cohort vs all nonleaders in this cohort
- all leaders in the cohort vs high-educated nonleaders in this cohort
- all appointed chiefs in the cohort vs owners of SME in this cohort
- appointed chiefs in the cohort working in private sector vs. appointed chiefs in public sector

General information on respondents in each sub-samples is presented in Table 3.2.

Table 3. 2. General information on respondents in sub-samples

Information on respondents	Name of cohort	Leaders			Nonleaders	
		All leaders	Appointed chiefs or managers of an administrative unit	Owners of SME	All non-leaders	High educated non-

			All	Private sector	Public sector			leaders (tertiary level)
Fraction of respondents, as % of total number of respondents in the cohort	„Children of transition” (N=215)	14%	12%	8%	3%	3%	86%	30%
	„Youth of transition” (N=197)	13%	10%	5,0%	5%	3%	87%	17%
	„Mobile-working-age-adults of transition” (N=388)	8%	4%	2%	2%	4%	92%	7%
Fraction of respondents with tertiary educational level attained, as % of respondents in sub-sample	„Children of transition” (N=215)	84%	100%	100%	100%	86%	35%	100%
	„Youth of transition” (N=197)	84%	100%	100%	100%	50%	20%	100%
	„Mobile-working-age-adults of transition” (N=388)	50%	75%	57%	83%	21%	10%	100%
Mean monthly income per person in a respondent's household (PLN)	„Children of transition” (N=215)	3804	4094	4592	2816	2592	1478	1752
	„Youth of transition” (N=197)	1787	1837	2250	1501	1628	1275	1709
	„Mobile-working-age-adults of transition” (N=388)	2275	2351	2452	2111	2189	1487	1795
Mean income /median income	„Children of transition” (N=215)	1.38	1.36	1.38	1.11	1.57	0.99	0.96

	„Youth of transition” (N=197)	1.08	1.11	1.12	1.00	0.93	1.02	1.05
	„Mobile-working-age-adults of transition” (N=388)	1.08	1.11	1.11	1.07	1.037	1.06	0.94
Mean monthly income per household (PLN)	„Children of transition” (N=215)	5941	5790	6389	4250	6567	3471	3835
	„Youth of transition” (N=197)	5023	4789	5271	4577	5767	3948	4297
	„Mobile-working-age-adults of transition” (N=388)	4712	5139	6152	5092	4225	2942	3618

Source: Author's calculation on a base of the questionnaire survey carried out in 2013

3.4.3. Exploratory analysis

The research uses an exploratory analysis based on structural equation modeling (SEM) implemented by IBM SPSS Amos. Maximum likelihood is a method for estimating structural equation models. A structural equation model (SEM) is build separately for each cohort and estimated by the data for this cohort. Each SEM is constructed to specify hypothetical relationships among variables: 1) how the latent (or unobserved) variables can be related to each other (this part of the model is called the structural model) and 2) how the observed variables can depend on the latent variables (this part of the model is called the measurement model).

3.4.3.1. THE STRUCTURAL MODEL

The structural model (the relationships between the latents) for each cohort covers the same latent variables named as follows:

- Resourcefulness of a respondent's parents
- Aspirations of a respondent
- Resourcefulness of a respondent
- Propensity to save
- Propensity to run-up-debts

— Economic security of a respondent’s household

The relationships between the latents in each structural model are presented on Diagram 3.1.

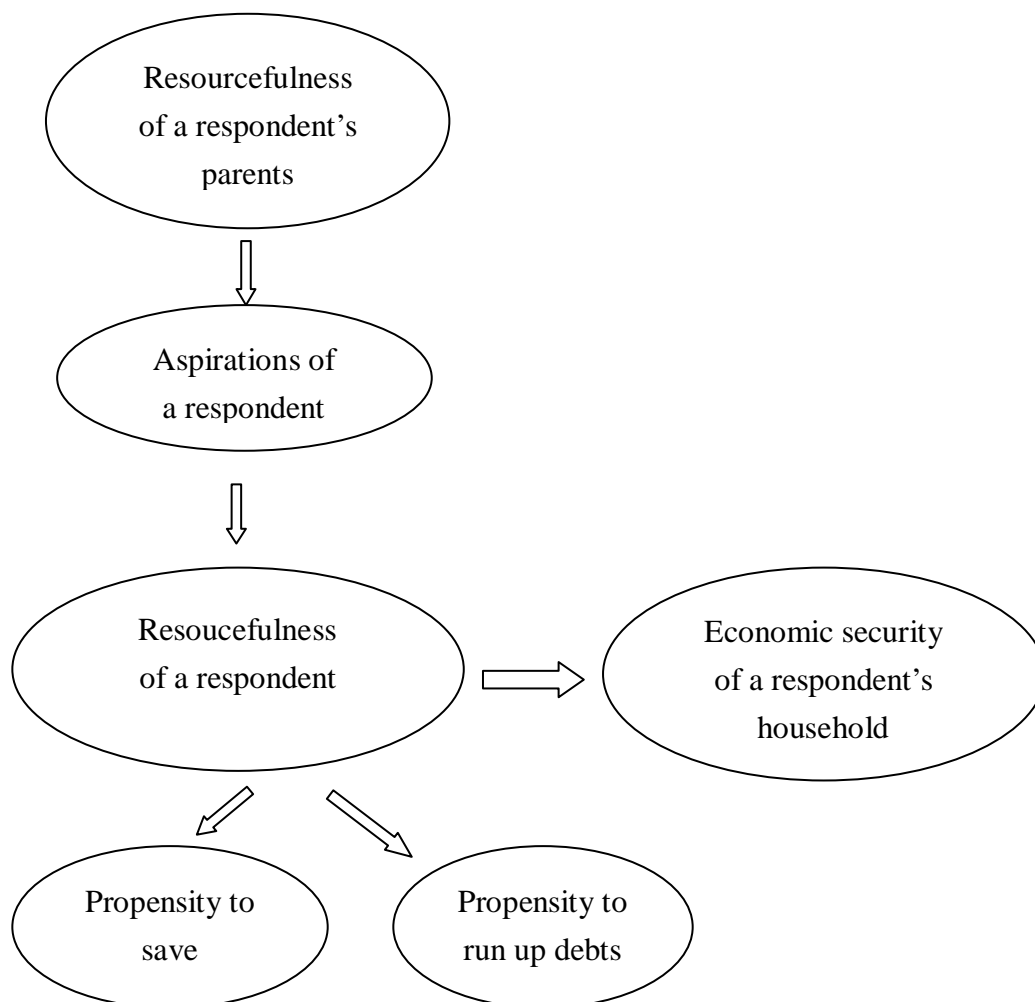


Diagram 3.1. The structural model (the relationships between the latent variables) for each cohort

3.4.3.2. THE MEASUREMENT MODELS

The measurement model for each cohort consist of six distinct measurement submodels which specify how each of the six latent variables influences a group of observed variables – see Table 3.3.

Table 3.3 Explanations for the variables in the SEMs

Latent variable influencing a group of observed variables	Observed variables dependent on a latent variable				
	Symbol	Explanation	Including a variable in SEM estimated for the cohort:		
			Children of transition	Youth of transition	Mobile-working-age-adults of transition
			Age in 2013 (year of the questionnaire survey)		
			25-34	35-44	45-64
Resourcefulness of a respondent's parents	Q29	Did your parents ever have financial problems?	x	x	Q31A → Q29
	Q30	Do/did your parents own a house/flat?	x		
	Q31A	What is your father's educational attainment?	x	x	x
	Q31B	What is your mother's educational attainment?	x	x	x
	Q18	Are chronic diseases an obstacle for you to earn money?	Q31A → Q18		Q31B → Q18
	Q15	Do you think your family and friends would lend you enough money to survive with your children for a period of: up to 1 month; 1-2 months; 3-5 month; more than 6 months	x		
	Q16	Are you capable of taking additional job facing financial problems?			x
	M22_2	Which from the expressions below describes the best the way of managing your household income? **		x	
	Q42(ln)	What is a value of your flat/house			Q31A → Q42
Aspirations of a respondent	EDU	What is your highest educational attainment	x	x	x
	Q44	What is your main source of income	x	x	x
	Q28	Do/did your children attend extra-paid activities?		x	x
	Q10	What is your household total indebtedness, , as a multiplicity of household's monthly income?			x
Resourcefulness of a respondent	Q2	Are you employed full time or do you work at least 35 hours per week this year?	x	x	x
	Q3	Were you employed full time or did you work at least 35 hours per week two years ago?	x	x	x

	Q14	Do you think a bank would give you a loan because of your creditworthiness?	x	x	x
	Q15	Do you think your family and friends would lend you enough money to survive with your children for a period of: up to 1 month; 1-2 months; 3-5 months; more than 6 months			x
	Q16	Are you capable of taking additional job facing financial problems?	x	x	x
	Q17	Do you have any valuable belongings (house, flat, real estate, or others) you could sell having financial problems?	x	x	x
	Q41	What is the property right of your house/flat?	x	x	x
	Q20	Do you or anybody from your household buy house/flat insurance?	x	x	x
	Q34	Do you support your parents permanently?			x
	Q37	Do you think your household will be able to maintain the living standard for the coming two years?		x	x
	Income (ln)	What is income per person in your household?	x	x	x
	Q28	Do/did your children attend extra-paid activities?	x		
Propensity to save	Q22	Do you have any private pension savings apart from the state pension insurance fund?	x	x	x
	Q23	Do you think you can save such an amount of money which could substantially rise your pension?	x	x	x
	Q25	Do you think it is up to you how much money you will have in your life?	x	x	x
	Q26	When you get a bonus/prize or gift will you save it or spend?	x	x	x
	Q40	What will be your main source of maintenance when you are retired?	x	x	x
	Q7	What is the estimated level of savings in your household, as a multiplicity of household's monthly income?	x	x	x
	Q42 (ln)	What is a value of your flat/house	x	x	x
Propensity to run up debts	Q10	What is your household total indebtedness, as a multiplicity of household's monthly income?	x	x	x

	Q10A	Do you think the total income of your household is high enough to refrain from loans?	x	x	x
	Q12	Which description shows the best the situation of your household: 1. Debt repaying forces my household to limit spending on basic goods; 2. Debt repaying forces my household to limit spending on luxury goods; 3. No limits in spending due to debt repaying 4. No answer	x	x	x
Economic security of a respondent's household	Q37	Do you think your household will be able to maintain the living standard for the coming two years?	x		
	Q39	Do you think your household will be able to maintain the today living standard when you are retired?	x	x	x
	Q19	Did your income decline due to your illness last year?	x		x
	M22_2	Which from the expressions below describes the best the way of managing your household income? **	x	x	x
	Q5 (ln)	What unexpected expenses can you meet during few days without any loans and any financial support from the others?	x	x	x
	Q38_6	Do you recognize an unexpected decrease in your household's income as a main threat to economic security of your household in the future?		x	
Explanation for additional relationships					
Observed variable influences other observed variable					
Q 31B: What is your mother's educational attainment?	→	Q18: Are chronic diseases an obstacle for you to earn money?			x
Q 31A: What is your father's educational attainment?	→	Q18: Are chronic diseases an obstacle for you to earn money?	x		
Q18: Are chronic diseases an obstacle for you	→	Q19: Did your income decline due to your illness last year?	x		x

to earn money?					
Q 31A: What is your father's educational attainment?	→	Q 42 (ln): What is a value of your flat/house			x
Q 31A: What is your father's educational attainment?	→	Q29: Did your parents ever have financial problems?			x
Q 31B: What is your mother's educational attainment?	→	Q27: Can you expect financial support from your children when you are old?			x
Q28: Do/did your children attend extra-paid activities?	→				x
Q27: Can you expect financial support from your children when you are old?	→	Q14: Do you think a bank would give you a loan because of your creditworthiness?			x
Observed variable influences latent variable					
Q29: Did your parents ever have financial problems?	→	Propensity to run up debts			x

* A measure of an observed variable based on responses to the question in the questionnaire survey

** M22_2 Expressions below describes the best the way of managing your household income?

1. there is enough for everything and for saving for the future,
1. there is enough for everything without renunciation but no savings for the future,
2. we live economically and there is enough money for everything,
3. we live economically to save for major spending,
4. there is enough money for cheap food, clothing, apartment rent and installment of credit repayment,
5. there is enough money for cheap food, clothing, apartment rent but not for installment of credit repayment,
6. there is enough money for cheap food and clothing, but not for apartment rent,

7. there is enough money for cheap food but not for clothing,
8. there is not enough money even for cheap food,
9. no answer

3.4.3.3. MEASURES OF OBSERVED VARIABLES

Measures of the observed variables are based on responses to the questions in the questionnaire survey. The majority questions refer to individual attainment/opinion/behavior of a respondent. Smaller part of questions concerns a financial situation of a respondent's household, like income per person, a level of savings/total indebtedness, managing of household's income. Regarding such questions it is assumed that responses given by a respondent are representative for her/his household as a whole (only one member of a household was asked).

The measures of observed variables are scaled:

- 1 – it means a high level of a variable
- 0 – it means a low level of a variable

For the questions with a choice of options:

EDU, Q31A, Q31B – 1 for a tertiary level of education while 0 for other levels

M22_2 – 1 for options 1-4 while 0 for options 5-8 (see the explanation for the variable M22_2 under Table 2)

Q12 – 1 for option 1 while 0 for options 2-3 (see the explanation for the variable in Table 2)

A few observed variables are measured in other way:

- Income per person in a household is measured in Polish currency, PLN, (in ln)
- Q5 - What unexpected expenses can you meet during few days without any loans and any financial support from the others? - is measured in PLN, (in ln)
- Q42 – a value of a respondent's flat/house, PLN, (in ln)
- Q7 – a level of savings as a multiplicity of household's monthly income
- Q10 – a level of total indebtedness as a multiplicity of household's monthly income
- Q15 – measured in a number of months

3.4.3.4. MEASURES OF LATENT (UNOBSERVED) VARIABLES

The matrix of implied covariances for all variables in the model can be used to carry out a regression of the unobserved (latent) variable on the observed variables. The resulting regression weight estimates can be obtained from Amos and they are named the factor score weights. These factor score weights give regression weights for predicting the unobserved variables from the observed variables. A measure of a latent

variable is a weighted sum of the individual observed scores using the factor score weights. In the paper the factor score weights are calculated separately for each cohort. For example, the measure of resourcefulness for an individual in the cohort “Children of transition” is the sum of observed scores computed as follows:

$$\text{individual response to Q31A (1 or 0) x cohort-factor-score-weight for Q31A} + \dots$$

3.4.3.5. MODEL EVALUATION

All regression coefficients in each SEM estimated for the cohort are significant at the 0.05 level (a majority of them are significant at the 0.01 level). All covariances between the errors included in the model are significant at the 0.05 level.

Model evaluation is one of the most unsettled and difficult issues connected with structural modeling. The literature suggests several fit measures. In the paper the SEM estimated for each cohort is evaluated on a base of the following ones:

P is a “*p* value” for testing the hypothesis that the model fits perfectly in the population.

CMIN/DF is the minimum discrepancy, divided by its degrees of freedom. The ratio should be close to 1 for correct models.

CFI is the comparative fit index. *CFI* values close to 1 indicate a very good fit.

RMSEA - *root mean square error of approximation* - a value of the *RMSEA* of about 0.05 or less indicates a close fit of the model in relation to the degrees of freedom.

PCLOSE - is a *p* value for testing the null hypothesis that the population *RMSEA* is no greater than 0.05

The values of the fit measures used in the research are presented in Table 3.4.

Table 3.4. Summary of the fit measures

Model for the cohort	P	CMIN/DF	CFI	RMSEA	PCLOSE
Children of transition	0,918	0,905	1,000	0,000	1,000
Youth of transition	0,887	0,907	1,000	0,000	1,000
Mobile-working-age-adults of transition	0,841	0,931	1,000	0,000	1,000

Source: own calculation

The evaluation results indicate a good fit of all three models.

4. FINDINGS FROM THE EXPLORATORY ANALYSIS

At the beginning of a discussion on the findings one should ask whether there are general cohort differences which justify dividing the whole sample of respondents into

three cohorts. Therefore, firstly such differences are identified, next, the hypotheses are verified.

4.1. GENERAL COHORT AND AGE DIFFERENCES

The exploratory analysis reveals some cohort and age differences. In comparisons made across large age spans can be assumed that the variance due to cohort far exceeds that due to age - this enables to identify magnitudes of generational (cohort) differences between “Children of transition” and “Mobile-working-age adults of transition” – while in comparison of closely spaced age levels it is reasonable to assume cohort differences to be rather small - this enables to identify magnitudes of age differences between “Children of transition” and “Youth of transition” .

Identifying cohort and age differences is based on comparisons made between standardized total effects of two latent variables: “Resourcefulness of respondent’s parents” and “ Aspirations of a respondent”. The total effect of each column variable on each row variable after standardizing all variables is presented in Table 4.1. For example, 0.773 - a first figure in the Table 4.1: The standardized total (direct and indirect) effect of “Resourcefulness of respondent’s parents” on “Aspirations” is 0.773. That is, due to both direct (unmediated) and indirect (mediated) effects of “Resourcefulness of respondent’s parents” on “Aspirations”, when “Resourcefulness of respondent’s parents” goes up by 1 standard deviation, “Aspirations” goes up by 0,773 standard deviations.

Table 4.1. Standardized total effects* of “Resourcefulness of respondent’s parents” and “ Aspirations” across cohorts

	Resourcefulness of respondent’s parents	Aspirations
	“Children of transition” (25-34 in 2013)	
Aspirations	0.773	0.000
Resourcefulness	0.648	0.839
Propensity to save	0.623	0.806
Propensity to run up debts	-0.346	-0.447
Economic security	0.614	0.795
Income per member of household	0.481	0.622
Main source of maintenance during retirement	0.121	0.157
Purchase of insurance	0.400	0.518
	“Youth of transition” (35-44 in 2013)	

Aspirations	0.621	0.000
Resourcefulness	0.444	0.715
Propensity to save	0.339	0.546
Propensity to run up debts	-0.207	-0.333
Economic security	0.433	0.698
Income per member of household	0.215	0.346
Diversification in income sources of maintenance during retirement	0.154	0.248
Purchase of insurance	0.196	0.316
	“Mobile-working-age adults of transition” (45-64 in 2013)	
Aspirations	0.420	0.000
Resourcefulness	0.317	0.756
Propensity to save	0.284	0.676
Propensity to run up debts	-0.093	-0.195
Economic security	0.276	0.657
Income per member of household	0.216	0.515
Diversification in income sources of maintenance during retirement	0.016	0.039
Purchase of insurance	0.112	0.267

*The total effect of each column variable on each row variable after standardizing all variables.

For example, 0.773 - a first figure in the Table 4.1: The standardized total (direct and indirect) effect of “Resourcefulness of respondent’s parents” on “Aspirations” is 0.773. That is, due to both direct (unmediated) and indirect (mediated) effects of “Resourcefulness of respondent’s parents” on “Aspirations”, when “Resourcefulness of respondent’s parents” goes up by 1 standard deviation, “Aspirations” goes up by 0,773 standard deviations.

In general, respondents in the cohort “Children of transition” are much better educated (see Table 3.2) and much more familiar with products in a financial market (all levels of education attained in the market economy, professional training in the advanced market economy) than respondents in the cohort “Mobile-working-age adults of transition” (see Table 3.1) . Parents of respondents in the cohort “Children of transition” are much more resourceful than parents of respondents in the cohort “Mobile-working-age adults of transition” (mean value of the latent variable “Resourcefulness of respondent’s parents” is 0,454 in comparison to 0,188 – the results presented Tables 4.2 and 4.4 in the section 4.2)

As a consequence, comparison between these two cohorts suggests the following cohort differences (compare the effects in Table 4.1):

1. Aspirations of respondents in the cohort “Children of transition” have much stronger impacts on:
 - a decline in “Propensity to run up debts” (-0,447 in comparison to -0,195)
 - an increase in “Diversification in income sources of maintenance during retirement” (0,157 in comparison to 0,039)
 - an increase in “Purchase of insurance” (0,518 in comparison to 0,267)
2. Resourcefulness of parents has stronger impact of respondent’s aspiration in the cohort of “Children of transition” (0,773 in comparison to 0,420)

It is possible to identify two important age differences:

- weaker impact of “Aspiration” on an increase in “ Propensity to save” for the cohort “Youth of transition” than the cohort “Children of transition” (0,546 in comparison to 0,806). People in age of 35-44 have usually a stable professional position and they are inclined to consume more and save less than the younger;
- stronger impact of “Aspiration” on an increase in “Diversification in income sources of maintenance during retirement” for “Youth of transition” than “Children of transition” (0,248 in comparison to 0,157).

The cohort and age differences as well as differences in measurement models (see Table 3.2) justify dividing the sample of respondents into three cohorts.

4.2. VERIFICATION OF THE HYPOTHESES

The hypotheses are verified on a base of mean values of latent variables for each cohort – Tables 4.2- 4.4 and the second part of the first hypothesis on a base of the ratios of mean values of latent variables – Table 4.5.

Table 4.2. Statistics of latents for the cohort named “ Children of transition” - a group of respondents in age of 25-34 in 2013 - by leaders and nonleaders

Name of latent variable	Statistics	Leaders					Nonleaders	
		All leaders	Appointed chiefs or managers of an administrative unit			Owners of SME	All nonleaders	High educated nonleaders (tertiary level)
			All appointed chiefs	Private sector	Public sector			
Resourcefulness of respondent’s parents	Mean	0.704	0.729	0.774	0.611	0.603	0.454	0.623
	coef. of variation	0.304	0.276	0.244	0.321	0.426	0.583	0.353
	mean/median	0.911	0.934	0.967	1.127	0.976	1.082	0.893
Aspiration	Mean	0.737	0.755	0.779	0.695	0.663	0.500	0.637
	coef. of	0.177	0.163	0.163	0.139	0.218	0.419	0.208

	variation							
	mean/median	1.031	0.995	1.015	0.974	0.981	0.993	0.947
Resourcefulness	Mean	0.680	0.710	0.739	0.635	0.557	0.438	0.538
	coef. of variation	0.195	0.161	0.164	0.059	0.260	0.395	0.248
	mean/median	1.028	1.063	0.982	0.990	1.031	0.968	0.942
Propensity to save	mean	0.633	0.663	0.695	0.583	0.507	0.395	0.490
	coef. of variation	0.224	0.181	0.181	0.080	0.330	0.423	0.269
	mean/median	1.023	1.066	1.006	1.031	1.077	0.947	0.940
Propensity to run up debts	mean	0.321	0.317	0.295	0.374	0.338	0.449	0.379
	coef. of variation	0.656	0.672	0.715	0.600	0.651	0.424	0.437
	mean/median	1.169	1.281	1.239	1.356	0.995	1.050	1.130
Economic security	mean	0.690	0.715	0.737	0.658	0.587	0.459	0.568
	coef. of variation	0.163	0.140	0.148	0.050	0.183	0.381	0.217
	mean/median	1.023	1.054	1.007	0.988	1.026	0.965	0.975

Table 4.3. Statistics of latents for the cohort named “ Youth of transition” - a group of respondents in age of 35-44 in 2013 - by leaders and nonleaders

Name of latent Variable	Statistics	Leaders					Nonleaders	
		All leaders	Appointed chiefs or managers of an administrative unit			Owners of SME	All nonleaders	High educated nonleaders (tertiary level)
			All appointed chiefs	Private sector	Public sector			
Resourcefulness of respondent’s parents	mean	0.673	0.766	0.670	0.896	0.380	0.350	0.596
	coef. of variation	0.491	0.330	0.472	0.051	1.050	0.977	0.558
	mean/median	0.775	0.870	0.790	1.000	2.360	2.327	0.872
Aspiration	mean	0.737	0.768	0.799	0.777	0.642	0.470	0.716
	coef. of	0.271	0.219	0.202	0.179	0.427	0.595	0.254

	variation							
	mean/median	0.932	0.971	0.971	0.993	0.955	1.005	0.935
Resourcefulness	mean	0.683	0.707	0.806	0.641	0.607	0.492	0.639
	coef. of variation	0.372	0.335	0.310	0.300	0.519	0.494	0.308
	mean/median	0.909	0.941	0.944	0.887	0.862	0.960	0.975
Propensity to save	mean	0.568	0.600	0.675	0.521	0.468	0.361	0.446
	coef. of variation	0.403	0.363	0.289	0.452	0.544	0.570	0.458
	mean/median	0.908	0.875	0.899	0.918	0.903	1.056	1.152
Propensity to run up debts	mean	0.401	0.355	0.277	0.427	0.544	0.446	0.390
	coef. of variation	0.599	0.630	0.748	0.559	0.462	0.493	0.602
	mean/median	1.068	0.948	0.818	1.114	1.162	1.019	0.976
Economic security	mean	0.722	0.750	0.843	0.685	0.633	0.538	0.685
	coef. of variation	0.350	0.298	0.271	0.283	0.533	0.444	0.285
	mean/median	0.890	0.925	0.921	0.887	0.842	0.998	0.948

Table 4.4. Statistics of latents for the cohort named “ Mobile-working-age adults of transition” - a group of respondents in age of 45-64 in 2013 - by leaders and nonleaders

Name of latent variable	Statistics	Leaders					Nonleaders	
		All leaders	Appointed chiefs or managers of an administrative unit			Owners of SME	All nonleaders	High educated nonleaders (tertiary level)
			All appointed chiefs	Private sector	Public sector			
Resourcefulness of respondent’s parents	mean	0.530	0.615	0.441	0.808	0.433	0.188	0.398
	coef. of variation	0.903	0.762	1.161	0.466	1.128	1.911	1.188
	mean/median	0.587	0.670	9.318	0.843	11.022	9.916	11.064
Aspiration	mean	0.711	0.731	0.708	0.804	0.688	0.452	0.687
	coef. of variation	0.313	0.251	0.278	0.241	0.386	0.417	0.216

	mean/median	0.948	0.987	0.971	0.954	0.917	1.041	1.012
Resourcefulness	mean	0.701	0.735	0.737	0.776	0.662	0.518	0.686
	coef. of variation	0.275	0.200	0.203	0.212	0.354	0.329	0.167
	mean/median	0.972	0.995	1.004	0.976	0.945	1.011	1.014
Propensity to save	mean	0.520	0.545	0.532	0.622	0.491	0.350	0.551
	coef. of variation	0.406	0.369	0.365	0.382	0.459	0.513	0.287
	mean/median	0.992	1.041	1.024	1.100	0.959	1.078	1.048
Propensity to run up debts	mean	0.213	0.152	0.138	0.169	0.282	0.263	0.210
	coef. of variation	1.045	1.125	1.463	1.147	0.916	0.895	0.812
	mean/median	1.653	1.514	1.647	1.588	1.570	1.579	1.320
Economic security	mean	0.694	0.745	0.734	0.787	0.635	0.501	0.694
	coef. of variation	0.312	0.219	0.225	0.251	0.407	0.364	0.160
	mean/median	0.958	0.971	0.984	0.926	0.928	0.997	0.944

The first hypothesis states: *Economic resourcefulness of leaders is at higher level than resourcefulness of other individuals in the cohort. If yes, the size of the differences between resourcefulness of leaders and nonleaders is different across cohorts.*

Comparison in the mean values of latent variables in each cohort shows that:

- resourcefulness of leaders is higher than nonleaders
- propensity to save is higher in a group of leaders than in a group of nonleaders
- propensity to run up debts is lower in a group of leaders than in a group of nonleaders
- economic security of households is higher in a group of leader than in a group of nonleaders

The results confirm that private economic decisions made by leaders build higher economic security of their households.

Regarding the second part of the first hypothesis, comparison in the ratios of mean values of latents (all leaders to all nonleaders) among cohorts (Table 4.5) reveals that the sizes of the differences in resourcefulness/ propensity to save/ propensity to run up debts/ economic security of households between leaders and nonleaders tend to diminish with age of respondents. The differences are the highest among the youngest cohort “Children of transition”. The findings suggest that the quality of education and

professional training attained by leaders in this cohort allows them to be much more resourceful than others in their cohort when they make their private economic decisions.

Therefore, the results confirm that the traits and attributes of the leaders are shaped by socio-economic development.

On the other hand higher resourcefulness of leaders than resourcefulness of high-educated non-leaders for all cohorts points at the importance of individual leader traits and attributes.

Table 4.5. Ratios of mean values of latent variables - leaders to nonleaders among cohorts

Name of latent variable	Ratio of mean values of latent variables		
	all leaders to all nonleaders	all leaders to high educated nonleaders	appointed chiefs in private sector to appointed chiefs in public sector
	"Children of transition" - age of 25-34 in 2013		
Resourcefulness of respondent's parents	1.551	1.130	1.267
Aspiration	1.474	1.157	1.121
Resourcefulness	1.553	1.264	1.164
Propensity to save	1.603	1.292	1.192
Propensity to run up debts	0.715	0.847	0.789
Economic security	1.503	1.215	1.120
"Youth of transition" - age of 35-44 in 2013			
Resourcefulness of respondent's parents	1.923	1.129	0.748
Aspiration	1.568	1.029	1.028
Resourcefulness	1.388	1.069	1.257
Propensity to save	1.573	1.274	1.296
Propensity to run up debts	0.899	1.028	0.649
Economic security	1.342	1.054	1.231
"Mobile-working-age adults of transition" - age of 45-64 in 2013			
Resourcefulness of respondent's parents	2.819	1.332	0.546
Aspiration	1.573	1.035	0.881
Resourcefulness	1.353	1.022	0.950

Propensity to save	1.486	0.944	0.855
Propensity to run up debts	0.810	1.014	0.817
Economic security	1.385	1.000	0.933

The second hypothesis states that: *Social backgrounds generate differences in economic resourcefulness of leaders across cohorts.*

In the paper only one aspect of social backgrounds is included in the research – home in which a respondent has grown up. Resourcefulness of parents (their educational level, well-being) is very differentiated. Coefficients of variation are from 90% for the oldest cohort to 30% for the youngest one (see Table 4.2-4.4). This differentiation in conditions in family home has not resulted in a similar size of differentiation in resourcefulness of respondents - coefficients of variation are as follows: only 27% for the oldest cohort, 37% for the 35-44 old cohort and 20% for the youngest one.

The findings suggest that conditions in family home are not a dominate factor in shaping leader traits and attributes.

The third hypothesis states: *Economic resourcefulness of leaders in a private sector is higher than in a public sector.*

Comparison in the mean values of respondent's resourcefulness shows that appointed chiefs in a private sector are more resourceful when they make their private economic decisions than their colleagues in public sector but only in regard to two younger cohorts: "Children of transition" and "Youth of transition" (resourcefulness is more or less the same for the oldest cohort "Mobile-working-age adults of transition").

The findings suggest that organizational differences between private and public sectors matter for leader qualities required in each sector.

The importance of organizational differences is also suggested by the difference in the mean values of respondent's resourcefulness between appointed chiefs and owners of SME (appointed chiefs are more resourceful than owners).

5. CONCLUSIONS

The results from the exploratory analysis show that:

- private economic decisions made by leaders build higher economic security of their households;
- the traits and attributes of the leaders are shaped by socio-economic development;
- resourcefulness of leaders is higher than resourcefulness of high-educated non-leaders for all cohorts what points at the importance of individual leader traits and attributes;

- conditions in family home are not a dominate factor in shaping leader traits and attributes;
- appointed chiefs in a private sector are more resourceful when they make their private economic decisions than their colleagues in public sector, what suggests that organizational differences between private and public sectors matter for leader qualities required in each sector.

ACKNOWLEDGEMENT

The article is based on the findings from the research project financed by the National Centre for Science (DEC-2011/01/B/HS4/03239)

REFERENCES

- [1] Boal, K., Whitehead, C. J. (1992), “A critique and extension of the stratified systems theory perspective”. In R. L. Phillips & J. G. Hunt (Eds.), *Strategic leadership: A multi-organizational perspective*, 237–255. Westport, CT: Quorum Books.
- [2] Day, D. V. (2000), “Leadership development: A review in context”, *Leadership Quarterly*, 11, 581–613.
- [3] Day, D. V., Zaccaro, S. J., Halpin, S. M. (Eds.). (2004), *Leader development for transforming organizations: Growing leaders for tomorrow*. Mahwah, NJ: Erlbaum.
- [4] Hunt, J. G. (1991), *Leadership: A new synthesis*, Newbury Park, CA: Sage.
- [5] Kozlowski, S. W. J., Gully, S. M., Salas, E., Cannon-Bowers, J. A. (1996), “Team leadership and development: Theory, principles, and guidelines for training leaders and teams”. In M. M. Beyerlein, D. Johnson, S. T. Beyerlein (Eds.), *Advances in interdisciplinary studies of work teams: Team leadership*, 3, 253–29, Greenwich, CT: JAI Press.
- [6] McCauley, C. D., Van Velsor, E. (Eds.). (2004), *Handbook of leadership development*, (2nd ed.). San Francisco: Jossey-Bass.
- [7] McCrae, R. R., Costa, P. T. (1987), “Validation of the five-factor model of personality across instruments and observers”, *Journal of Personality and Social Psychology*, 52, 81–90.
- [8] McCrae, R. R., Costa, P. T., Jr. (1990), *Personality in adulthood*. New York: Guilford Press.
- [9] Mumford, M. D., Zaccaro, S. J., Harding, F. D., Jacobs, T. O., Fleishman, E. A. (2000), “Leadership skills for a changing world: Solving complex social problems”, *Leadership Quarterly*, 11, 11–35

- [10] Ployhart, R. E., Bliese, P. D. (2006), "Individual ADAPTability (IADAPT) theory: Conceptualizing the antecedents, consequences, and measurement of individual differences in adaptability". In S. Burke, L. Pierce, & E. Salas (Eds.), *Understanding adaptability: A prerequisite for effective performance within complex environments*, 3–39, St. Louis, MO: Elsevier Science.
- [11] Schaie, K. W. (1994), "Developmental designs revisited". In S. H. Cohen and H. W. Reese (eds), *Life-span developmental psychology: Theoretical issues revisited*, Hillsdale, 45-64, N.J.: Erlbaum.
- [12] Streufert, S., & Swezey, R. W. (1986), *Complexity, managers, and organizations*. Orlando, FL: Academic Press.
- [13] Zaccaro, S. J. (2001), *The nature of executive leadership: A conceptual and empirical analysis of success*. Washington, DC: American Psychological Association.
- [14] Zaccaro, S. J. (2002), "Organizational leadership and social intelligence". In R. Riggio (Ed.), *Multiple intelligences and leadership*, 29–54, Mahwah, NJ: Erlbaum.
- [15] Zaccaro, S. J., & Banks, D. (2004), "Leader visioning and adaptability: Bridging the gap between research and practice on developing the ability to manage change", *Human Resource Management Journal*, 43, 367–380.
- [16] Zaccaro, S. J., Kemp, C., Bader, P. (2004), "Leader traits and attributes". In J. Antonakis, A. T. Cianciolo, and R. J. Sternberg (Eds.), *The nature of leadership*, 101–124, Thousand Oaks, CA: Sage.
- [17] Zaccaro, S. J., Wood, G., Herman, J. (2006), "Developing the adaptive and global leader: HRM strategies within a career-long perspective". In R. J. Burke & C. L. Cooper (Eds.), *The human resources revolution: Why putting people first matters*, 277–302, Amsterdam: Elsevier
- [18] Zaccaro, S. J. (2007), "Trait-based perspectives of leadership", *American Psychologist*, 62, 1, 6–16.