

COOPINDEX: HUMAN DIGNITY AS THE ESSENCE OF CO-OPERATIVE VALUES AND PRINCIPLES

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Impact Co-op

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ABSTRACT

335 members and employees from five Canadian and three US co-ops answered a 174 statement questionnaire - The Co-opIndex - to express their perception of their co-operatives. The tool was developed in response to the need for a method of evaluating how such values-based organizations as worker co-operatives abide by their values and principles. It was meant to give an early warning to the board of any tendency of the co-operative to move towards a stage of organizational decline. The CoopIndex also provides guidance to the co-operative by highlighting the areas requiring attention if the co-op is to be improved or renewed.

The statistical analysis of the results distinguished two groups of questions. 58 questions related to Co-operative Values and Principles and 116 questions related to management practices. This paper presents the results of an exploratory Principal Components Analysis of the 58 questions. The analysis yielded 12 components which seem to be a very good reflection of the essence of the ICA set of Co-operative Values. The main component, Human Dignity, explained 61.86% of the variance. Thus the analysis revealed a hidden aspect of the nature of co-operatives, their focus on human dignity. The remaining 11 components were:

- | | |
|---|---|
| 2. Solidarity with Other Co-ops, $\alpha=0.82$ | 8. Security, $\alpha=0.59$ |
| 3. Social Responsibility for the community, $\alpha=0.80$ | 9. Self-responsibility, $\alpha=0.73$ |
| 4. Development, $\alpha=0.79$ | 10. Caring for Others within Our Co-op, $\alpha=0.64$ |
| 5. Fairness, $\alpha=0.82$ | 11. Foundations of Democracy, $\alpha=0.63$ |
| 6. Social Responsibility for the World, $\alpha=0.75$ | 12. Caring for Others in the World, $\alpha=0.68$ |
| 7. Solidarity within Our Co-op, $\alpha=0.70$ | |

We found that the eight co-ops differed significantly in their results. This means that the Co-opIndex is a reliable tool for measuring the value of co-operative identity. As such it can be an

indispensable tool not only for co-ops but for other organizations which seek to abide by humanistic values. The analysis carried out in other types of organizations should be conducted with tools based on the analysed tool but appropriately adapted for use in the different organizational contexts. The development of such a family of tools is an urgent need if co-operatives and the like organizations are to replace profit driven corporations.

KEY WORDS

- Organizational Development
- Co-operatives
- Diagnosis
- Values and Principles
- Ethical audit

INTRODUCTION

Co-operatives are exceptional organizations (Novkovic, 2007). The fact that their main goal is to meet their owners' needs and not just to bring them profit, influences their form of governance, their organizational culture and the way they do business (Webb, 2016). The same feature may make them the best organizations for the future. These features and the emerging importance of co-operatives as well as other social enterprises necessitates the development of good tools for measuring how reliable they are, how well they perform, but first of all how much co-operatives conform to what they promise – their values and principles. The Co-opIndex is a tool devised just for this purpose. This paper is the widest analysis of the first results of its use as well as a proposal to refine it in a way that will better meet the needs of both the co-operatives themselves but also the general public who want to know how co-operative the co-ops are.

We start the paper with the general background of co-operative specificity, and how this specificity and similarity to other values-based organizations may impact its organizational development. We outline the stages that may lead to collapse of such organizations. In the introductory part we also present the assumptions for the diagnosis. In the description of the method we describe how the CoopIndex was developed to help diagnose co-operatives and provide them feedback. In the next part of the paper we present the results of eight Canadian and US worker co-operatives. We used the results of a Principal Components Analysis to confirm the reliability of the scales we were using. It is interesting how the analysis focused upon the set of co-operative values and principles and that the results not only confirmed the set of co-operative values but showed their most important aspect – recognizing human dignity. We describe the new scales and see how they may help to differentiate between co-operatives. In the final part of the paper we propose the future use of the Co-opIndex beyond the worker co-operative sector; for we take it for granted that other co-op sectors should treat their employees as if they were members.

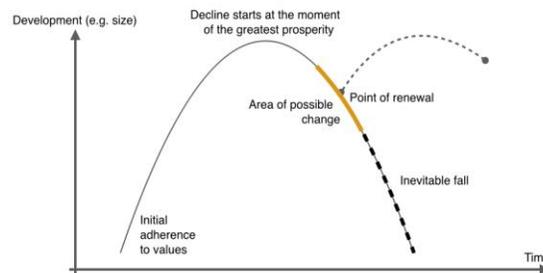
BACKGROUND

Why we need a tool to diagnose co-ops?

The profit oriented economy, based on anonymous investors maximizing their income, has changed the world so it is on the verge of self-destruction. According to the data available from the World Health Organization, more people die unnecessarily from preventable diseases each year than during the Second World War. Global warming is threatening the lives of hundreds of millions of human beings who may soon become climate refugees. Arms industries are bringing profits to the investors around the world at the cost of lives and suffering of people in Africa, Latin America and the Middle East. In these circumstances, more and more people are seeking a new business model – a company which can satisfy people’s needs and work for the good of its customers and employees and not simply for the profit of its owners. Co-operatives are pointed out as exactly such companies (Webb, 2016). They are not just profit oriented; they are based on a set of traditional values and principles that put people and their needs before profit. They have been proven to do better than the rest of economy (UK Co-operatives Report, 2012). Yet, mainstream economic and business education seems to have abandoned them as an alternative (Kalmi, 2009). In addition, under the pressure to conform to the dominant business paradigm by becoming more profit-driven, co-operatives seem to undergo an “identity crisis” (Cote, 2000, Ketilson, 1997). If they are to take the leading role in the economy of the future we have to find a way to assist them in meeting this “identity crisis” by developing a method of testing their adherence to values and principles in as rigorous a way as we determine profitability in investor owned companies. The tool we describe in this paper is meant to serve this very role.

Co-ops take many shapes and forms, but at the heart of each is the drive by the founding members to meet some of their common needs and aspiration within a framework of the specific Co-op Values and Principles (ICA Statement of Co-operative Identity) (Novkovic, 2008). These values and principles, being inherently abstract, must be embodied within the co-op in concrete ways that resonate with their members in order to meaningfully embody the co-op model (Hough, 2015). However, co-ops operate in a constantly changing environment, both internally as they grow and develop, take in new members, adapt management structures to meet new demands, etc.; and as the co-op faces the external challenge of new competition, changing regulatory environment and economic cycles.

FIGURE 1. GROWTH AND INEVITABLE DECLINE OF VALUES-BASED ORGANIZATIONS



Co-ops, like other organizations based on values such as religious orders, are subject to the forces noted above which may lead to abandoning their values and principles as they react to address their changing situation (Hostie, 1973). As depicted in Figure 1 they grow until a certain point when they reach their greatest development and prosperity. From that point, if nothing is done, they decline and fall as their previously successful approaches ossify and cease evolving from their core values. In their slow decline, they reach a point requiring renewal, an area of possible change. If they do not notice it and act, an inevitable fall and decline follows and nothing can save the organization. The challenge for the co-operative is that its members may not notice the changes, as in the story of a frog, which immediately jumps out of hot water, but is boiled if it is thrown into cold water and slowly heated (Senge, 1990). Only monitoring the organization and habitually returning to the initial values can save the organization from inevitable degeneration. Organizational diagnosis literature (e.g. Stocki, 2008, Cameron & Quinn, 2005; Blake & Mouton, 1983; Harrison, 1987; Czarniawska-Joerges, 1992; Curtis et al. 2001) offers a whole spectrum of methods. Out of many options, bearing in mind we are looking for values and principles, we decided to focus on introspective methods and chose a questionnaire as the simplest and easiest to method use.

There are a number of factors in organizational decline (Weitzel & Jonsson, 1989; Vaughn, 1999). The organization's current niche environment may no longer support the needs of the organization as it has evolved and management may not have the adaptive capacities to seek new opportunities or to adapt to shrinking resources within the niche. This lack of management responsiveness may be due to "success" and over confidence derived from a long period of growth which leads to a certain blindness to changing conditions and new challenges. It may also be due to the increasing complexity which the growth of the organization has engendered. This complexity, with its stable roles, can also lead to complacency and the inability to respond effectively to a changing environment (Whetten, 1987).

Co-ops do face the generic challenges of organizational decline; however, they have the added dimension of needing to maintain their members' commitment which requires an ongoing process of engagement and creative responsiveness. While always requiring the delivery of the practical outcomes for which the co-op was developed, maintaining member commitment also requires the members' perception and belief that the co-op is truly doing business based upon the Co-operative Values and Principles (Novkovic, 2006). Without this dimension the co-operative at the level of product or services can readily become indistinguishable from other forms of business. This sets a very high bar for an effective co-op diagnosis for it needs to both assess the state of the co-op's embodiment of the Co-op Values and Principles as well as its product, processes, and capacities.

What are the conditions for a successful diagnosis?

Adherence to values seems very difficult to diagnose. If you desire to do it, you have to start by accepting human experience as a reliable source of information (Purser & Montuori, 1995; Heron, 1996). You also have to do everything to objectify this experience to make it reflect not subjective but objective reality (Roskam, 1989). What if all people are mistaken because of a common lack of knowledge or lack of access to information? To mitigate this possibility you have to confront their experience with other data to balance the limits of their experience with

other information in order to develop a more realistic assessment. A diagnosis must always be an ongoing learning process. You should never make the mistake of making decisions on the basis of mere questionnaire results. The CoopIndex results are just a starting point for a better understanding of your co-op not the end of the process.

The Co-op Index was developed within the framework of Total Participation Management (TPM) developed by Ryszard Stocki (Stocki et al., 2010). TPM assumes the very nature of the person requires participation in shared actions, organizations, and communities that respond to their needs and aspirations. TPM understands personal growth and development as fundamentally shared goals for all persons, and thus for a co-operative's members and employees. This ontology of the person presupposes: (a) people actively participate in making sense of their environments; (b) this sense making guides their actions and involvement in response to their environment; (c) people must be in positions in which they have the responsibility and capacity to take actions of importance to the co-operatives activities and results; and (d) they share a common vision of the good toward which they are striving. (Stocki 2008, Hough 2015)

The Co-op Index was developed collaboratively by a group of co-operative developers, co-op members and co-op leaders to be a handy diagnostic tool for the organizational development of worker co-ops. Many papers and book chapters have described its functions and diagnostic model (Stocki, Prokopowicz, Novkovic, 2012; Novkovic, Prokopowicz, Stocki, 2012; Hough & Novkovic, 2012; Stocki, & Łapot, 2014, Bryson & Bryson 2012). In the following parts of the paper we present empirical data gathered so far from eight Canadian and American co-operatives. The paper presents a new model that resulted from a principal component analysis and which supported our initial assumptions.

METHOD

The CoopIndex Tool

How did we construct the tool?

Many different methods may be used to find the truth about an organization, starting from ordinary conversations, group meetings, and reflections. However, in such discussions difficult topics may be avoided. We wanted to objectify the truth via an ideal external model which we developed using the method of concept mapping (Laukkanen, 1998; Bryson et al., 2004). Using the process of oval mapping (Bryson et al., 2004) we asked a group of co-operative activists to describe an ideal co-op that would embody in all its actions, both internally and externally, the Co-operative Values and Principles. The 'ideal' was described in concrete terms by identifying processes or states of affairs within the co-operative which would be an indication of the desired characteristics. These were then formulated into descriptive statements which resulted in a 174 item questionnaire. The ideal characteristics and derived statements were then mapped to the various values, principle and organization dimensions. In some cases the same statement was linked both to a value or principle and to an organizational dimension. A more detailed

description of the tool development process can be found in (Stocki, Prokopowicz & Novkovic, 2012)

Structure of the results and their interpretation

Since the tool was designed as a consulting tool for the diagnosis of co-operatives, the CoopIndex report is meant to initiate a discussion about issues within the diagnosed co-operative. To make the discussion easier we grouped the questions into 52 overlapping scales. As this is also a large number we grouped the scales into 6 categories: (1) Co-operative Values; (2) Co-operative Principles; (3) Systems; (4) Climate; (5) Attitudes; and (6) Outcomes.

The following details show the six categories along with the content of each one. The Values are taken directly from the International Cooperatives Alliance's Statement of Co-operative Identity. The Principles have the same origin; however, we also included five additional principles adapted from the Mondragon Co-operative system's principles which relate directly to the nature of worker co-operatives. The Organizational Dimensions were drawn from the earlier work by Ryszard Stocki as well as from the ideal characteristic when their unique features seemed to require the creation of other specific dimensions.

1. The Co-operative Values include: Self-Help, Democracy, Equality, Equity, Solidarity, Honesty, Openness, Social Responsibility, Caring for Others, and Self-Responsibility.
2. The Co-operative Principles include: Voluntary and Open Membership, Democratic Member Control, Member Economic Participation, Autonomy and Independence, Education, Training and Information, Co-operation among Co-operatives, Concern for Community, Concern for the Environment, Labour Control, Participatory Management, Payment Solidarity, and Social Transformation.
3. The Organizational Systems include: Communication Systems, Transparency, Feedback Systems, Development of co-operative members, Remuneration, Innovations, Personnel Policies, Processes, and Strategies.
4. The Organizational Climate which indicates the general tone and mood among members and employees within the co-op. They include the following dimensions: Mutual Respect, Leader Competence, Trust in Leadership, Trust in Co-workers, Participatory Management Style, Relations with Co-workers, and Fun.
5. The Personal Attitudes and Actions include: Participatory Knowledge, Ownership, Process Improvement, and Responsibility.

6. The Outcomes – Individual, Organizational, and Social include: Identification, Satisfaction, Self-realization; Independence, Viability, Products and Services; Co-operation with other Co-operatives, Care for Community, the Environment, and External Relations.

By organizing the data in this way we expected that the results would be analyzed more easily and hence would more readily facilitate the identification of targeted development actions in the areas where the co-op is determined to be falling short of the ideal characteristics. When answering the questionnaire, the respondents are asked to decide to what degree they agree with a given statement. If a respondent "totally disagrees" with a statement the organization is far from the ideal, if she "totally agrees" the organization is close to the ideal. To objectify the results we do two things: (1) We ask the same person similar questions; (2) The groups of questions are formulated into scales whose values are determined by asking many people in the co-op to respond to the same questions. The more the scale reflects a phenomenon, the more similar are the answers between different persons and between the questions, and thus the higher Cronbach's alpha statistic.

TABLE 1. CHARACTERISTICS OF THE CO-OPERATIVES PARTICIPATING IN THIS STUDY

Industry	Number of respondents	% of respondents	Country
1. Engineering Co-op	3	.9	US
2. Services	102	30.4	US
3. Retail Stores	47	14	Canada
4. Restaurant	32	9.6	Canada
5. Food processing	69	20.6	Canada
6. Service and production	23	6.9	US
7. Service	45	13.4	Canada
8. Engineering service	14	4.2	Canada
Total	335	100	

After the first two diagnoses 19 questions were either reformulated or added. These questions were removed from the present study although sometimes they had only a minor stylistic change. This resulted in much missing data. It should be noted that apart from the 52 scales and various ways of presenting the results Stocki, et al (2012) proposed different other aggregations of the data that were considered useful for consulting and development practices. Namely there were 4 one-number indexes: Maturity Index, Values Index, Principles Index, and Trust Index. The first three are calculated as a percentage of positive answers to a selected set of questions. The fourth - the Trust Index is the percentage of those who answered the demographic questions. Unfortunately due to different sets of those questions in different co-ops, we were not able to offer the values of the indexes. The diagnosis of the various co-operatives was part of a CURA research project. In the review of the project representatives from the participating co-ops were asked to evaluate the tool. They perceived it as useful tool, but too long and too complicated.

To respond to these concerns we decided to explore the internal structure of the tool and build a new simplified version of it.

PARTICIPANTS

After it had been developed, the Co-opIndex was extensively promoted in various forums, where representatives of Canadian or US co-ops were present. The tool was presented at co-operative meetings and conferences, where representatives of hundreds of co-ops were present. The participants were from the co-ops which volunteered to participate in the research encouraged by the practical benefits from such participation. Table 2 shows the demographic characteristics of the participants in the study. As several co-op developers participated in creating the tool, they also encouraged their clients to use the Co-opIndex.

For many reasons, co-ops were rather reluctant to participate in the pilot studies, on one hand the tool was new and untested, and on the other hand, participation required the members make the extra effort and time required to participate without assured benefits. The eight co-operatives which participated were clients of the co-op developers who had developed the tool. The individual respondents worked for these eight US and Canadian worker co-ops. Table 1 presents the sector, number of respondents and the country of origin. In all co-ops almost all employees responded to the questionnaire with the minor exception of persons who were on leave from the co-op during the time the study was conducted. So the results are representative of all employees.

TABLE 2. DEMOGRAPHICS OF THE PARTICIPANTS

Characteristic	N	%
Membership in the co-op		
Yes	67	20.0
No	86	25.7
I'd rather not say	12	3.6
Missing data	170	50.7
Gender		
Male	98	29.3
Female	135	40.3
Missing data	102	30.4
Age		
Less than 26	17	5.1
26-35	94	28.1
36-45	56	16.7

Characteristic	N	%
46-55	47	14.0
More than 55	28	8.4
I'd rather not say	14	4.2
Missing data	79	23.6
Education		
Primary	7	2.1
Secondary	30	9.0
College	50	14.9
Professional	4	1.2
Bachelor's	54	16.1
Master's	5	1.5
Doctoral	2	.6
I'd rather not say	13	3.9
Missing data	170	50.7
Tenure in the co-op		
Less than 3 years	85	25.4
3-5 years	90	26.9
5-10 years	25	7.5
More than 10 years	17	5.1
I'd rather not say	37	11.0
Missing data	81	24,2
Job profile		
Managerial	31	9.3
Blue collar	79	23.6
Clerical	18	5.4
Independent specialist	12	3.6
Other	10	3.0
I'd rather not say	15	4.5
Missing data	170	50.7
Total	335	100

One of the co-ops refused to answer the demographic questions except the gender question.

RESULTS

Result distributions

After the preliminary exploration of descriptive statistics, we found that our 174 questions fell into two categories. In 58 of them, their distribution was close to normal though it was skewed positively. We deduced that in the cases of these questions the perception of a co-op depended mainly on the features of the co-ops. Positive skewness meant that respondents were choosing rather positive responses to the statements. In most of the other 116 questions we found out that their distributions were bimodal. In traditional interpretation such questions are considered unreliable. When we tested the reasons of the bimodality we found out that it was caused primarily by the sex of the respondent. This means the same aspect of a co-operative was viewed differently by the men and the women respondents. Some of the divergence also depended on tenure, education, etc. Although the questions were a good measure of what a particular co-op was like, because of the statistical requirements for Principal Component Analysis, they could not be used for our purposes. Of course, these questions can still contribute to a diagnosis of a co-operative, but they have to be interpreted with the help of the respondents who can identify the factors that explain the difference. Perhaps women have different sensitivity looking at the same reality, or perhaps they experience a different reality in the co-operative. We have decided to make this issue the topic of a separate analysis and a future paper.

Initial reliability

The results from 325 respondents allowed us to calculate the Cronbach's alphas. Kline (1999) claims that in case of psychological constructs we may accept scales with reliability lower than 0.7, because of the variability of the constructs. For instance, for intelligence or other cognitive variables 0.8 is expected to be the minimum value. For that reason we decided to assume 0.6 as an acceptable value for the statistic. The original scales of the tool had quite high alphas and only five out of 52 fell below the level 0.6 and 17 were equal or higher than 0.8.

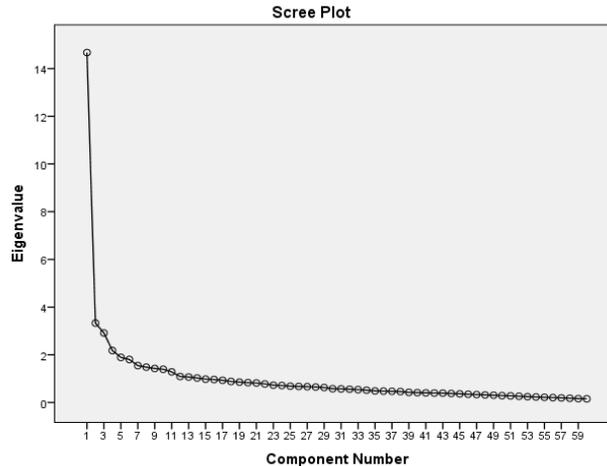
EXPLORATORY PRINCIPAL COMPONENTS ANALYSIS

How do the answers correlate if we do not force our categories?

After separating the 58 statements with unimodal distributions which most probably reflected the variability of the co-operatives we noticed that they referred to the categories we had related with Co-operative Values and Principles. The remaining 116 questions referred to different aspects of management. To explore the internal structure of the scales, we performed an exploratory principal component analysis of the group of 58 statements to generate "mathematically correlated groups." For this procedure, the data had to meet some criteria that were previously tested. Since we needed complete answers, we substituted the missing data with mean values. We tested the sampling adequacy and sphericity to find out if our analysis was possible (Field, 2009).

A principal component analysis (PCA) was conducted on the 58 items with orthogonal rotation (varimax) with Kaiser normalization. The Kaiser–Meyer–Olkin measure verified the sampling adequacy for the analysis, KMO = .893, Bartlett’s test of sphericity = 3577.41, $p < .000$, $df = 1770$ indicated that correlations between items were sufficiently large for PCA. An initial analysis was run to obtain eigenvalues for each component in the data.

FIGURE 2. PRINCIPAL COMPONENTS ANALYSIS. SCREE PLOT OF THE EIGENVALUES



Fourteen components had eigenvalues over Kaiser’s criterion of 1 and in combination they explained 61.86% of the variance. As the two last components consisted of one question each, we decided to drop them out of further analysis reducing the list to 12 components. Table 3 shows the factor loadings after rotation. The items that cluster on the same components suggest that component (1) represents Human Dignity; component (2) represents Solidarity with Other Co-operatives; component (3) represents Social Responsibility for the Community; component (4) Development; component (5) Fairness; component (6) Social Responsibility for the World; component 97) Solidarity within Our Co-op; component (8) Security; component (9) Self-responsibility; component (10) Caring for others within Our Co-op; component (11) Foundations of Democracy; and finally, component (12) Caring for Others in the World.

TABLE 3. PRINCIPAL COMPONENT ANALYSIS - ROTATED COMPONENT MATRIX OF 12 COMPONENTS

Values <0.1 were excluded for better clarity, the values in bold face created the components. Rotation Method: Varimax with Kaiser Normalization, Rotation converged in 21 iterations.

	1	2	3	4	5	6	7	8	9	10	11	12
13. When making decisions my co-workers and supervisors take my welfare into account.	.708				.186		.127	.122		.115		
165. My contribution to discussions is respected.	.641			.162	.307			-.114		.146	.129	-.105

COOPINDEX: HUMAN DIGNITY AS THE ESSENCE OF CO-OPERATIVE VALUES

	1	2	3	4	5	6	7	8	9	10	11	12
16. The effort of individuals is honestly appraised.	.629	.144	.104	.165	.267				.193			
37. I trust people in our co-op.	.624			.132	.169	.271	.234		.157			
87. People in our co-op respect each other's opinions.	.613		.128		.213	.285					.122	.156
23. My supervisor consults me about the tasks entrusted to me.	.600	.105		.133	-.150	.121	.224	.221		.111		
42. I have the opportunity to influence which tasks I will perform.	.563			.135			.186			.125	.238	
56. Members and employees are more important than capital to our management.	.556	.136	.208	.104	.194	.139		.208	-.118	.108	.112	
3. I am willing to participate in the evaluation of my coworkers' work.	.527		.149		-.145		.212		.309	.185	.181	
118. Different points of view are welcomed by my coworkers.	.469		.203	.269	.296	.240					.145	.221
67. Experienced employees assist in the professional development of their junior colleagues.	.441	.235	.188	.343		-.162		.236				.141
123. Our co-operative is a model for other businesses in our industry.	.383	.278	.128			.175	.327	.366				.114
133. All cultures are equally respected in our co-op.	.356		.260		.201	.317		.171	.143			
100. Our co-op supports other co-ops.	.131	.792				.129				.130		
106. Our co-op seeks business links with other co-ops.		.788		.113				.134				
160. Our co-op participates in efforts to develop the co-op sector.	.103	.746		.133		.136		.123	.127		.121	

COOPINDEX: HUMAN DIGNITY AS THE ESSENCE OF CO-OPERATIVE VALUES

	1	2	3	4	5	6	7	8	9	10	11	12
124. Members and employees of our co-op exchange experiences with representatives of other coops.		.641		.110				-.161	.151			.193
113. Economic development of our local community is important in our decision making process.			.827	.107	.134					.122		
117. Our co-op is concerned about the well-being of the community where it operates.	.174		.761	.234	.103							
159. We undertake some actions to support our community.	.190	.143	.637	.107		.121		-.181	.166			.147
98. Our co-op is focused on creating an environmentally sustainable business.	.110		.606			.226	.144		.235			
128. Employees and members are engaged in strategic planning.	.114	.194	.399	.345	.193	.114			.222		.131	.103
78. The future of the co-op is a topic for discussion among the members, the management and the employees.			.146	.683	.173	.215			.143		.128	.113
51. I am satisfied with my professional development in the co-op.	.310			.629						.114	.123	-.149
104. The co-op provides opportunities for professional development.	.213	.250	.219	.564			.112	.155	.111			
55. The co-op supports employees in their development.	.426	.176	.261	.498		.131		.247	.170			
79. I have an impact on the strategy of the co-op.	.224		.183	.407	.264		.321	-.194			.382	
140. Members and employees make suggestions for ways to improve the business on a regular basis.	.140	.215	.228	.403		.145			.377			.238

COOPINDEX: HUMAN DIGNITY AS THE ESSENCE OF CO-OPERATIVE VALUES

	1	2	3	4	5	6	7	8	9	10	11	12
28. Dismissals are always justified.	.245		.121		.592		.122				.235	-.308
138. We always search for candidates for new openings among co-op members/employees first.	.130		.249	.128	.524				.149			.194
119. Promotions are determined on the basis of employee expertise in the job.	.241		.252	.255	.516	.268				-.177		
163. Our co-op ensures that hours available for work are shared fairly.	.203			.245	.471	.446		.141				.109
102. Our co-op is earning enough to cover its operations and members' needs.		.366			.443		.157	.161		.230		
111. My share in co-op's risks is fair compared to other members.		.308	-.175		.427			.326	.176	.223		.200
164. Our co-op is not unduly influenced by external stakeholders.	.189	.179	-.144	-.146	.426		.110		.399	.294	.156	.107
95. Our co-op cares about keeping wage differences small between members and employees.	.119	.264	.269		.406		.307	.268				-.199
167. Our co-op is socially responsible.	.370	.230	.196		.132	.593	.148	.263			.128	.133
169. Fair prices for our products are more important than extra profit.				.126	.141	.577	.206		.114	.341	.158	-.133
151. I am satisfied with our co-op's contribution to making the world a better place.	.314	.308	.170			.520		.323	.204		.119	
15. Our co-op promotes co-op culture in society.	.239	.334		.197		.468						
75. Members and employees are honest with their dealings with the co-op.	.391		.171	.208	.245	.426	.132		.127	.153		

COOPINDEX: HUMAN DIGNITY AS THE ESSENCE OF CO-OPERATIVE VALUES

	1	2	3	4	5	6	7	8	9	10	11	12
8. In case of a financial crisis at the co-op, I would be ready to voluntarily give up a part of my compensation for some time.	.145	-.106			.156		.718					.128
22. I would be willing (according to my ability) to increase my investment in the co-op if needed.	.241	.119				.134	.690					
94. I would volunteer some of my time to strengthen our co-ops position if needed.	.126					.146	.635	.263		.140	.148	.108
153. I am satisfied with my benefits at the coop.	.148					.107	.189	.669	.188	.143		
112. Our co-op can secure my employment in the future.	.126	.242	-.117	.318	.184		.160	.540		.217		
93. Members of the co-op understand the requirements for making the business successful.			.170	.219	.130			.180	.664	.107		
116. Our directors understand the bylaws and legislation that govern our co-op.	.126	.340			.162		-.108	.419	.492			
71. We celebrate successes in the co-op.	.282	.194	.104	.265		.222		.110	.476		-.123	.124
54. Members and employees do their best to make the development of the co-op possible.	.305	.181	.166	.317	.110	.233			.461	.119		
171. My co-workers find me reliable.							-.136	.202		.731		
170. I take my co-workers' well-being into account.	.172	.148			.115		.122	-.110		.648		.129
131. I promptly pass important information to those affected by it.	.157	.106			-.133	.111		.156		.574	.114	.225
50. I understand the bylaws and rules that govern our co-op.	.157		-.137			.143	.193				.726	

	1	2	3	4	5	6	7	8	9	10	11	12
146. I have a good understanding of the various co-op roles - employee, member, manager, director, officer.	.293							.178			.652	.330
121. I know what actions have to be undertaken in order to secure our co-op's success.		.128	.223	.170	.107					.147	.617	
161. When making decisions, I take their ecological consequences into account.			.261				.115		.155	.182	.121	.700
101. I take into account ethical trade issues in my purchasing decisions.		.240					.225			.175		.698

The new model of the data

The principal component analysis yielded scales that made great sense to us. Looking at the content of the questions in each component (Table 3) we named the scales and also tested their reliabilities. In the Table 4 we present the new set of scales. Some minor changes were introduced to the components after testing the reliability of the components as scales: statements 123 and 133 were removed from the Human Dignity component; statement 128 removed from the Social Responsibility for the Community component; and statement 116 was removed from the scale Foundations of Democracy.

TABLE 4. CO-OPERATIVE VALUES COMPONENTS AND THEIR CRONBACH'S ALPHAS

1. Human Dignity, $\alpha=0.89$
2. Solidarity with Other Co-ops, $\alpha=0.82$
3. Social Responsibility for the community, $\alpha=0.80$
4. Development, $\alpha=0.79$
5. Fairness, $\alpha=0.82$
6. Social Responsibility for the World, $\alpha=0.75$
7. Solidarity within Our Co-op, $\alpha=0.70$
8. Security, $\alpha=0.59$
9. Self-responsibility, $\alpha=0.73$
10. Caring for Others within Our Co-op, $\alpha=0.64$
11. Foundations of Democracy, $\alpha=0.63$
12. Caring for Others in the World, $\alpha=0.68$

The component 8, Security was rejected from further analysis because of low alpha value.

The Human Dignity Component

We called the first component Human Dignity. It had the highest reliability of all the scales we analyzed. Its composition is very interesting and reflects the recognition of others as human beings, as subjects who have a right to make decisions and have to be respected. This component confirms the thesis that most successful participatory companies differ from the others in recognizing people as persons. It was postulated in the last chapter of a book about such organizations (Stocki, Prokopowicz, Żmuda, 2012).

Differences between co-operatives

In order to find out the significance of differences between particular co-operatives we decided to use One-way ANOVA. As for this statistic the variables have to have a normal distribution, we performed Kolmogorov-Smirnov test to check the normality of their distributions. The co-op results with normal distributions are marked with * in Table 5.

TABLE 5. THE RESULTS OF THE COMPONENTS FOR THE EIGHT COOPERATIVES

The scale of results was from 1 to 7

		N	Mean	Std. Dev.	Std. Er.
Dignity	Co-op 1	0	.	.	.
	Co-op 2*	72	5.53	.87	.10
	Co-op 3	0	.	.	.
	Co-op 4*	16	6.14	.42	.10
	Co-op 5	46	5.78	.77	.11
	Co-op 6*	12	5.19	1.01	.29
	Co-op 7	0	.	.	.
	Co-op 8	0	.	.	.
	Total	146	5.65	.84	.07
Development	Co-op 1	3	6.28	.38	.22
	Co-op 2	78	5.07	1.00	.11
	Co-op 3*	37	5.51	.88	.14
	Co-op 4*	18	5.13	.99	.23
	Co-op 5	41	5.50	.98	.15
	Co-op 6	21	5.48	.80	.17
	Co-op 7*	36	5.08	.47	.08
	Co-op 8	11	4.55	.79	.24
	Total	245	5.24	.92	.059
Democracy Foundations	Co-op 1	2	6.33	.00	.00
	Co-op 2	82	5.42	.85	.09
	Co-op 3*	36	5.33	1.08	.18

		N	Mean	Std. Dev.	Std. Er.
	Co-op 4*	18	5.18	.91	.21
	Co-op 5*	52	5.13	1.03	.14
	Co-op 6	19	5.37	.99	.23
	Co-op 7	39	4.62	.86	.144
	Co-op 8*	13	4.33	.58	.16
	Total	261	5.16	.97	.06
Self-responsibility	Co-op 1*	3	6.11	.51	.29
	Co-op 2	88	5.33	.98	.10
	Co-op 3	37	5.44	.80	.13
	Co-op 4*	24	5.68	.77	.16
	Co-op 5	52	5.76	.86	.12
	Co-op 6	20	5.30	1.01	.23
	Co-op 7	41	5.07	.66	.10
	Co-op 8*	13	4.46	.97	.27
	Total	278	5.38	.92	.06
Fairness	Co-op 1	0	.	.	.
	Co-op 2	31	5.44	.74	.13
	Co-op 3*	13	5.55	.96	.27
	Co-op 4*	8	5.91	.79	.28
	Co-op 5*	14	5.85	.59	.16
	Co-op 6	13	5.38	1.10	.31
	Co-op 7	0	.	.	.
	Co-op 8	0	.	.	.
	Total	79	5.57	.83	.09
External Solidarity	Co-op 1	3	6.08	.80	.46
	Co-op 2	82	6.27	.58	.06
	Co-op 3	28	6.28	.70	.13
	Co-op 4*	14	5.80	.86	.23
	Co-op 5	37	5.95	.78	.13
	Co-op 6	19	4.89	1.10	.25
	Co-op 7	37	6.11	.97	.16
	Co-op 8*	12	4.75	1.39	.40
	Total	232	5.97	.93	.06
Internal Solidarity	Co-op 1*	3	5.67	.58	.33
	Co-op 2	81	5.29	1.10	.12
	Co-op 3*	38	5.15	1.03	.17
	Co-op 4*	20	5.28	1.27	.28
	Co-op 5	43	5.45	1.08	.16
	Co-op 6*	18	5.41	1.19	.28
	Co-op 7	33	4.48	1.15	.20
	Co-op 8*	13	4.64	.62	.17
	Total	249	5.17	1.13	.07

		N	Mean	Std. Dev.	Std. Er.
Community Social Responsibility	Co-op 1*	3	5.33	.52	.30
	Co-op 2*	75	4.40	1.16	.13
	Co-op 3	33	5.87	.87	.15
	Co-op 4*	19	5.95	.78	.18
	Co-op 5	57	6.16	.64	.08
	Co-op 6	21	5.38	.79	.17
	Co-op 7*	38	5.45	.71	.12
	Co-op 8*	13	4.88	.96	.27
	Total	259	5.36	1.12	.07
Global Social Responsibility	Co-op 1	3	6.13	.12	.07
	Co-op 2	83	5.91	.77	.08
	Co-op 3	35	5.87	.87	.15
	Co-op 4*	20	5.86	.79	.18
	Co-op 5	47	5.97	.91	.13
	Co-op 6*	19	5.56	.60	.14
	Co-op 7	0	.	.	.
	Co-op 8	0	.	.	.
	Total	207	5.88	.81	.06
Internal Caring for others	Co-op 1	3	6.00	.67	.38
	Co-op 2	87	6.27	.46	.05
	Co-op 3	36	6.23	.55	.09
	Co-op 4*	21	5.92	.87	.19
	Co-op 5	55	6.38	.49	.07
	Co-op 6*	22	5.98	.45	.10
	Co-op 7	0	.	.	.
	Co-op 8	0	.	.	.
	Total	224	6.23	.55	.04
Global Caring for others	Co-op 1	2	5.25	1.06	.75
	Co-op 2	84	5.85	.74	.08
	Co-op 3	32	5.89	.89	.16
	Co-op 4*	22	5.89	.72	.15
	Co-op 5	54	6.06	.84	.11
	Co-op 6	20	5.40	.97	.22
	Co-op 7	28	5.09	1.16	.22
	Co-op 8	13	5.00	.46	.13
	Total	255	5.74	.90	.06

Bearing in mind that not all differences can be interpreted as significant because of not meeting the normal distribution criterion, we present the One-Way ANOVA results in Table 6.

TABLE 6. ANOVA TESTS OF SIGNIFICANCE OF DIFFERENCES BETWEEN THE RESULTS OF CO-OPS

		Sum of Squares	df	Mean Square	F	Sig.
Dignity	Between Groups	8.19	3	2.73	4.11	.01
	Within Groups	94.33	142	.66		
	Total	102.52	145			
Development	Between Groups	18.87	7	2.70	3.41	.00
	Within Groups	187.20	237	.79		
	Total	206.07	244			
Democracy Foundations	Between Groups	32.02	7	4.58	8.46	.00
	Within Groups	119.58	221	.54		
	Total	151.60	228			
Self-responsibility	Between Groups	26.71	7	3.82	4.99	.00
	Within Groups	206.59	270	.77		
	Total	233.30	277			
Fairness	Between Groups	3.02	4	.75	1.10	.36
	Within Groups	50.79	74	.69		
	Total	53.81	78			
External Solidarity	Between Groups	50.75	7	7.25	10.85	.00
	Within Groups	149.74	224	.67		
	Total	200.49	231			
Internal Solidarity	Between Groups	25.73	7	3.68	3.07	.00
	Within Groups	288.30	241	1.20		
	Total	314.02	248			
Community SR	Between Groups	123.75	7	17.68	22.16	.000
	Within Groups	200.23	251	.80		
	Total	323.98	258			
Global SR	Between Groups	3.17	5	.63	.97	.44
	Within Groups	131.45	201	.65		
	Total	134.62	206			
Internal Caring	Between Groups	4.91	5	.98	3.45	.01
	Within Groups	62.03	218	.29		
	Total	66.94	223			
Global Caring	Between Groups	29.58	7	4.23	5.97	.00
	Within Groups	174.80	247	.71		
	Total	204.38	254			

Where the Significance is higher than 0.05 we should not speak about differences. When we compare the means in table 5, it is interesting to note that various co-ops were superior to one

another in different aspects of a co-op's functions. No single co-op had the highest results in all components.

Correlations

Table of correlations between the variables are in Table 7. Most of them are statistically significant.

TABLE 7. MATRIX OF R-CORRELATIONS BETWEEN THE COMPONENTS

Component (N)	1	2	3	4	5	6	7	8	9	10
1. Dignity	--									
N	146									
2. Development	.64**	--								
N	125	245								
3. Democracy Foundations	.37**	.52**	--							
N	119	206	229							
4. Self-responsibility	.50**	.55**	.35**	--						
N	134	231	220	278						
5. Fairness	.70**	.57**	.61**	.58**	--					
N	54	76	76	75	79					
6. External Solidarity	.37**	.40**	.35**	.43**	.53**	--				
N	123	205	198	220	72	232				
7. Internal Solidarity	.46**	.38**	.34**	.17**	.49**	.14*	--			
N	119	207	195	230	73	196	249			
8. Community SR	.41**	.46**	.16*	.43**	.47**	.23**	.18**	--		
N	129	217	206	238	72	212	212	259		
9. Global SR	.57**	.55**	.41**	.52**	.59**	.61**	.45**	.40**	--	
N	136	177	164	189	77	166	171	182	207	
10. Internal Caring	.15	.18*	.24**	.27**	.40**	.37**	.21**	.18*	.27**	--
N	141	187	167	204	77	171	178	195	197	224
11. Global Caring	.21*	.14*	.37**	.29**	.38**	.32**	.32**	.24**	.18*	.33**
N	138	216	200	233	76	203	212	226	191	201

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

DISCUSSION

In contrast to all the previous research and tests of the CoopIndex, principal components analysis revealed a completely new picture of the essence of co-operative management. It is hidden in the first component we called “Human Dignity”. This component essentially consists of two previous scales that reflected the values of Honesty and Openness. The scree plot in Figure 1 shows how much variance is captured by this single component. Because of this we present this component in detail as it reveals the co-op characteristics that are most important for the co-op members. The first 13 rows of the second column of Table 5 list all the questions in this component. We find there statements that confirm that co-op members are considered to be free, responsible, and knowledgeable persons. They are invited to actively participate in the decision making process: trust (statement 37); participation (statements 165, 87, 23, 42, 118); are recognized as individuals (statements 2, 56, 133); and are responsible for the common good (statements 3, 67). On the scale 1-7 all mean values for the particular co-ops were above 5. However, we must remember that within a given co-operative the results of particular respondents may differ substantially. This result confirms the essence of successful management as described in detail in Stocki et al (2012) and confirmed by the empirical results of a tool similar to CoopIndex (Stocki 2015). This essence, which was considered an amazing oversight (Titus, 1984), is participation and the recognition of human dignity, also called total participation (Titus, 1984).

There are two more components that are composed of statements from two scales of the previous version of the tool. Questions which referred to Self-help and Democracy made a component we called Development. It is a very important feature of this component that many self-development questions (51, 55, 104) are in the same component with questions that reflect the use of knowledge on a daily basis (140, 78, 79). We might say that only real business literacy and development creates appropriate conditions for real member engagement. Finally previous scales of Equality and Equity merged in the component we called Fairness. It reflects fairness in hiring, compensation, membership, promotions, dismissals, but also in the treatment of external stakeholders.

Apart from merging some components the PCA distinguished other components that are considered to refer to the same value. This is the case with three components. The value of solidarity is represented in two components; one reflects solidarity with other co-ops and the other solidarity within the co-op. Similarly, social responsibility for the community is separate from social responsibility for the world, and finally caring for others within a co-op is in a separate component than caring for others in the world. These distinctions between components prove that the co-operative values have a local and a general meaning and the two meanings do not always coincide. From the point of view of developing expertise, it means, for instance, that caring for others in the world is a different domain of expertise than caring for others in our co-operative. It should be taught separately as it requires different forms of skill development, and is based on different knowledge structures. The same is true of social responsibility and solidarity.

CONCLUSION

The tool's high reliability and the content of the new scales which we refer to the Co-operative Values surprised even the authors. The concept of total participation (Stocki at al 2012) assumes that participation is not a mere value but an indispensable element of human dignity. It is not in the sphere of ethics but of ontology; it reflects an essential feature of a human being. The agreement of 325 respondents from eight different co-ops is a strong argument that we all expect and deserve participation. The tool should be further developed and used broadly to help diagnose co-ops.

Because all a co-operative's employees are on the front line, for both activating the Co-op Values and Principles with their co-op's members, as well as for evaluating in practice the outcomes of their co-operative's governance and management decisions; the ideal characteristics of a worker co-operative with its focus on real participation and the co-op values can speak directly to the employees of any type of co-operative. An analysis using the Co-opIndex can provide valuable information to the members and the board of directors regarding a co-op's capacity to live up the Co-op Principles and Values as assessed by a key stakeholder group – the employees. Although the tool will required slight modifications (to remove the statements that only relate to worker co-ops, we think that we are ready to offer the tool to other types of co-ops (Consumer Co-ops, Credit Unions, Co-op Banks) to diagnose the extent their management styles adhere to Co-operative Values and Principles in the eyes of their employees. Since the proper use of the tool is fairly complicated we will need to offer training to Co-op Developers in using the tool.

More information about the Tool: www.coopindex.coop

More information about the Research: www.stocki.org

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