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Article

Worker cooperative practices and perceived job satisfaction in Greece: A descriptive survey

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Abstract: This descriptive study examines perceptions of income equality, skill development, job creation, organizational resilience, and job satisfaction among worker-cooperative members in Greece. A quantitative cross-sectional electronic survey used non-probability convenience sampling and included 382 employees who were also cooperative members. Twenty-eight statements, organized into four domains, were described using five-category response percentages. Agreement with the income-distribution policy was 81.4%, while 74.3% endorsed the statement linking development opportunities with satisfaction, and 82.8% endorsed the cooperative's contribution to community well-being. These figures are sums of the displayed agreement categories and remain provisional because the underlying counts and valid item denominators are unavailable. A numerical consistency assessment found that 70 of 140 table percentages could not be reproduced using a common unweighted denominator of 382. Statements connecting a cooperative practice with satisfaction represent respondents' evaluations of that statement, rather than an independently estimated relationship between constructs. Social exchange theory provides an interpretive framework. Convenience recruitment, incomplete recruitment records, and unestablished scale properties limit the findings. The four domains provide topics for member consultation about distributive fairness, learning opportunities, employment prospects, and organizational continuity. The study does not estimate causal effects, confirm statistical associations, rank the domains, or support population-level generalization.

Keywords: democratic governance; distributive fairness; workforce development; employment security; organizational resilience; social exchange; workplace well-being

1. Introduction

Worker cooperatives are enterprises in which employees participate directly in ownership and governance, creating an organizational form that differs from the conventional hierarchical firm through workplace democracy, shared decision-making, and a closer connection between labor and residual claims (Audebrand, 2017; Mannan, 2018). Interest in cooperatives reflects concerns about income inequality, employment insecurity, and the quality of working life. Because cooperative members are simultaneously workers and owners, distributive fairness, participation, learning opportunities, employment security, and organizational continuity are relevant topics for examining their work experiences. Studies of cooperative and social-economy workplaces report favorable experiences in some settings, while also identifying differences between organizations and groups of workers (Castel et al., 2011; De Reuver et al., 2021; Morton, 2024).

The Greek setting provides a useful context because worker cooperatives

operate within an economy that has experienced prolonged financial stress, labor-market disruption, and more recent energy and sustainability shocks. Research on external shocks in European fuel markets provides context for organizational concerns about continuity (Kalogiannidis, Chatzitheodoridis, et al., 2022). Research on collaborative communication in Greek firms and IT-supported HR practices in education also identifies organizational practices relevant to coordination and workforce development (Kalogiannidis, Kalfas, and Chatzitheodoridis, 2022; Papaevangelou et al., 2024). These studies motivate attention to members' experiences; they do not establish effects in worker cooperatives.

The purpose of this study is to describe perceptions of four cooperative domains—income equality, skill development, job creation, and organizational resilience—and statements concerning employee job satisfaction. A cross-sectional survey of 382 cooperative employees who were also members in Greece provides the empirical setting. The contribution is contextual: the study brings these domains together within one Greek cooperative sample. It does not compare ownership forms or establish that cooperative ownership produces better outcomes. The analysis is descriptive and does not estimate associations between independently measured constructs.

The analysis distinguishes perceptions of cooperative practices from perceptions of their relationship with satisfaction. Endorsing a statement about the contribution of training or income fairness to satisfaction is not equivalent to estimating a statistical relationship between separately measured constructs. This distinction bounds the interpretation of the descriptive results.

2. Literature Review and Research Questions

In this section, authors are required to provide a detailed account of the procedure that was followed while conducting the research described in the report. This will help the readers to obtain a clear understanding of the research and also allow them to replicate the study in the future. Authors should ensure that every method used is described and include citations for the procedures that have been described previously. Avoid any kind of discussion in this section regarding the methods or results of any kind.

2.1. Worker cooperatives and employee job satisfaction

Worker cooperatives combine employment with ownership and participation, creating a setting in which employees may exercise voice over operational and strategic decisions. Previous research examines participation, helping climate, meaningful work, and well-being in cooperative or social-economy organizations (De Reuver et al., 2021; Macassa et al., 2023; Morton, 2024). These organizational forms differ: evidence from a work integration social enterprise or a freelancer cooperative cannot automatically be transferred to all worker-owned enterprises. Collaborative communication provides a related organizational context, but findings from Greek beverage firms do not establish employee-satisfaction outcomes in cooperatives (Kalogiannidis, Kalfas, and Chatzitheodoridis, 2022).

Social exchange theory offers an integrative framework for interpreting these dimensions (Cropanzano and Mitchell, 2005). In a cooperative, members can evaluate remuneration, opportunities to learn, employment prospects, and continuity as resources within an ongoing organizational relationship. Fair treatment and opportunities for participation may encourage favorable attitudes, but these expectations depend on members' experiences of how cooperative commitments are implemented.

Within this framework, income equality concerns members' evaluations of material distribution; skill development concerns access to learning; job creation

concerns perceived employment contribution; and resilience concerns confidence in organizational continuity. These domains organize the descriptive research questions. They are not treated as validated latent variables, and reciprocity and trust were not separately measured. The analysis therefore does not test social exchange theory or estimate a mechanism connecting cooperative practices with satisfaction.

The literature also cautions against treating social-economy status as a sufficient explanation of job quality. Ollé-Espluga et al. (2021) found mixed support for the promises of Economy for the Common Good firms in Austria and Germany after comparison with other workers. De Reuver et al. (2021) examined participation and helping climate in cooperative workplaces with different shares of co-owners, highlighting the importance of employment arrangements within organizations. These findings support context-sensitive description and make it important to distinguish employee ownership, participation in practice, and members' subjective evaluations.

2.2. Income equality and job satisfaction

Income equality is a visible distributive feature of the cooperative model. Collectively agreed remuneration rules may compress wage differences and make distribution procedures more transparent. Perceived equality, fairness, and satisfaction with earnings nevertheless concern different judgments: equal pay need not be experienced as equitable, and a member may endorse a distribution rule while finding the amount insufficient. Research on fairness in Italian social-service organizations gives particular attention to procedural fairness (Tortia, 2008). Comparative work on for-profit and not-for-profit employment also shows that satisfaction cannot be reduced to wage levels alone (Becchetti et al., 2014). These studies support examining the content of members' responses without assuming that the present survey isolates a pay-fairness effect.

RQ1. How do respondents evaluate income fairness, income-distribution policies, and statements linking income equality with job satisfaction?

2.3. Skill development and job satisfaction

Skill development concerns access to learning and respondents' assessments of competence and professional growth. Participation in several operational and governance activities may expose cooperative members to different tasks, but exposure alone does not demonstrate effective learning. Worker cooperatives also face tensions between collective commitments and individual needs (Audebrand, 2017). Research on IT-supported HR practices in Greek education and on green and digital reskilling provides related workforce-development contexts (Papaevangelou et al., 2024; Ragazou et al., 2025). Neither study validates the questionnaire used here or demonstrates training effects in this cooperative sample. Separate reporting of opportunity, confidence, and satisfaction items is therefore more appropriate than treating them as one established scale.

RQ2. How do respondents describe skill-development opportunities, training-related confidence, and statements linking learning with job satisfaction?

2.4. Job creation and job satisfaction

Job creation is an organizational employment outcome, whereas perceived job security is an individual assessment. Creating new positions, retaining existing positions, and contributing to community well-being should therefore be distinguished. Eurofound (2019) examines job creation and retention through organizational case studies in five EU Member States. That evidence motivates attention to employment continuity, but does not establish how many jobs the cooperatives represented in the present questionnaire created. The survey statements concern members' perceptions of employment contribution and its relevance to their own work experience.

RQ3. How do respondents evaluate their cooperative's employment contribution, perceived job security, and community role?

2.5. Cooperative resilience and job satisfaction

Organizational resilience refers to the capacity to adapt to adverse conditions while maintaining core activities. For members who are also employees, continuity can concern both employment income and ownership interests. International comparative evidence on worker cooperatives addresses employment stability and organizational adjustment, while emphasizing differences across settings (Pérotin, 2016). European energy-market shocks provide a broader context for uncertainty (Kalogiannidis, Chatzitheodoridis, et al., 2022). In this study, statements about resilience capture perceived adaptability, reassurance, and stability. They do not measure financial reserves, survival probabilities, or recovery following an observed shock.

RQ4. How do respondents evaluate cooperative adaptability, continuity, and statements linking resilience with job stability and satisfaction?

Figure 1 organizes the four domains and their satisfaction-related wording. It is a topic map for RQ1–RQ4, not a regression model. The figure does not represent estimated associations, causal paths, or an ordering of the domains.

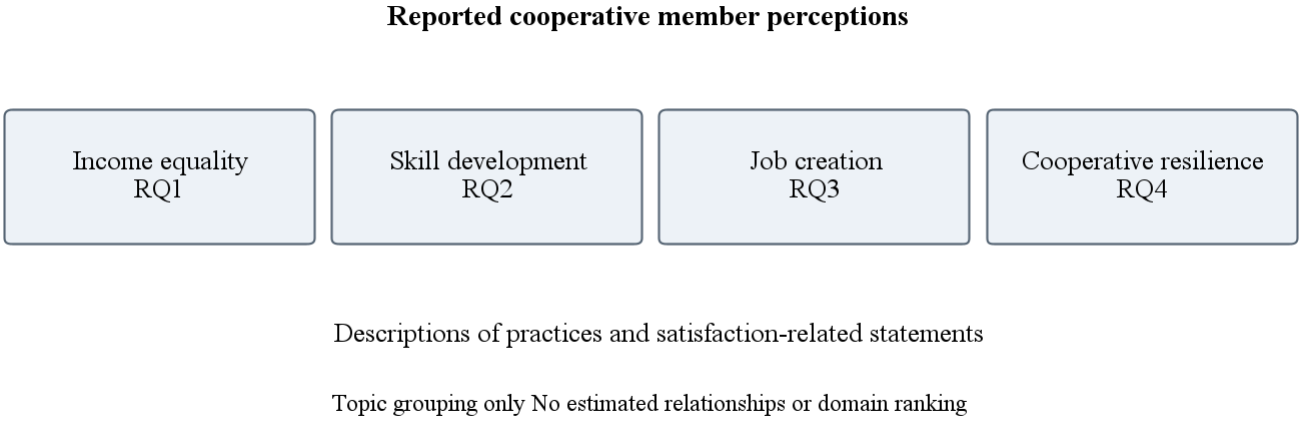


Figure 1. Descriptive domains of cooperative member perceptions.

3. Materials and Methods

3.1. Research design and participants

The study employed a quantitative cross-sectional survey. Eligible participants were employees who were also members of worker cooperatives in Greece. The final sample comprised 382 respondents recruited through non-probability convenience sampling. Their dual worker/member status was relevant to the questionnaire's focus on employment experiences within collectively owned organizations. The individual respondent was the unit of analysis.

3.2. Recruitment and sample size

The questionnaire was distributed electronically to selected eligible participants, who were allowed one week to respond. Participation was voluntary, and electronic informed consent was required before access to the survey questions, as described in Section 3.5.

The sample size was achieved through convenience recruitment; no probability-based sample-size calculation was used. The analysis describes item-level responses within this sample.

3.3. Data collection and measurement

A structured questionnaire was developed around the research objectives and reviewed by two subject-matter experts for clarity and content relevance. **Tables 1–4** present 28 statements, with seven statements in each of the four domains. The five-point response scale was 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. The questionnaire included evaluations of cooperative practices and statements explicitly connecting those practices with satisfaction or security. Each statement is presented separately to preserve this distinction.

Expert review addresses content relevance and clarity; it does not establish internal consistency, convergent validity, discriminant validity, or the separateness of predictor and outcome measures (Boateng et al., 2018). No composite scores were constructed. The satisfaction-related wording embedded within the four domains was not treated as an independent job-satisfaction scale.

Cronbach's α requires inter-item covariance information as well as item variances; separate percentage distributions do not provide the joint responses needed to estimate it (Cronbach, 1951). Accordingly, α values, factor loadings, and convergent or discriminant validity statistics were not estimated from these marginal distributions. Reliability also requires attention to the measurement model and its assumptions, rather than a threshold value alone (McNeish, 2018). The analysis therefore remains at the item level.

3.4. Data analysis

The analysis describes the percentage distributions in **Tables 1–4** and **Figures 2–5**. SPSS version 20.0 was identified as the software used for the original tabulations; respondent-level data and original output were unavailable for reanalysis. Agreement percentages cited in the text were calculated by adding the displayed agree and strongly agree categories. Adding rounded percentages can differ from calculating a combined proportion directly from counts. No regression, correlation, significance testing, or interval estimation was performed. No hypothesis decisions were made.

Numerical consistency was assessed by examining row totals, comparing five-category response profiles, and determining whether each percentage could result from an integer count out of a common unweighted denominator of 382 after rounding to one decimal place. Four pairs of identical item profiles were identified, and 70 of the 140 percentage cells could not be reproduced under this denominator assumption. Different valid item denominators or weighting could change this assessment, but neither was documented. Appendix A describes the procedure and reports the domain-level results in **Table A1**. These checks do not recover the original responses or identify the reason for identical profiles. The descriptive percentages remain provisional pending verification of the underlying counts and denominators.

3.5. Research ethics and confidentiality

The study was approved by the Research Ethics and Deontology Committee of the University of Western Macedonia on 3 November 2025 (protocol number 166/2026). This approval applies to the present survey of employees who were also members of worker cooperatives in Greece.

Informed consent was obtained electronically. Participants had to select a mandatory consent checkbox before they could access the survey questions; this selection recorded their consent. No names, email addresses, or IP addresses were retained with questionnaire responses. Response files were stored in password-protected files accessible only to the research team. Results are presented in aggregate form to protect participants' anonymity and confidentiality.

4. Results

4.1. Respondent characteristics

The respondent profile comprised 69.5% men and 30.5% women (**Figure 2**). Education categories were bachelor's degree (58.4%), master's degree (26.6%), tertiary certificate (9.2%), and PhD (5.8%; **Figure 3**). Membership duration was 5–15 years (64.1%), more than 15 years (25.9%), and less than five years (10.0%; **Figure 4**). These descriptive distributions are subject to the numerical limitations stated in Section 3.4 and are not used to infer representativeness.

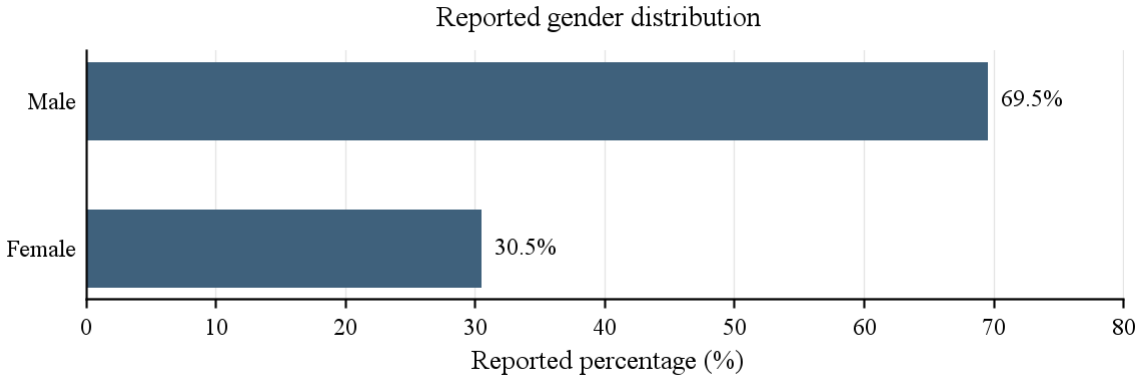


Figure 2. Gender distribution of respondents (%).

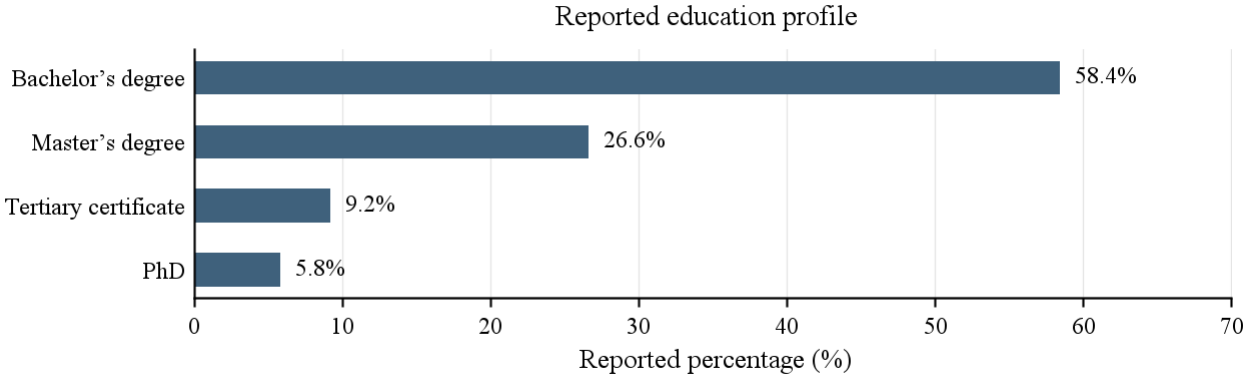


Figure 3. Educational qualifications of respondents (%).

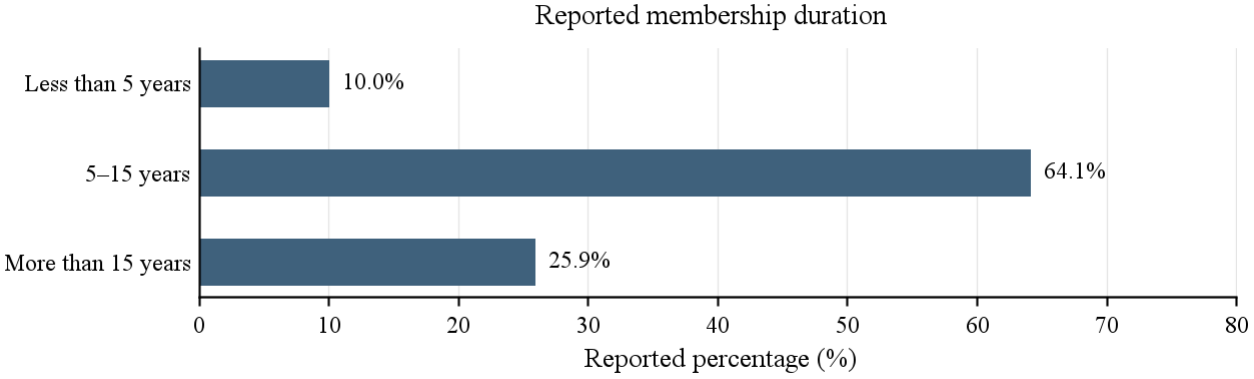


Figure 4. Duration of cooperative membership (%).

4.2. Income equality

Table 1 presents the income-equality responses. The displayed agreement categories sum to 65.7% for perceived fairness relative to colleagues and 81.4% for satisfaction with the income-distribution policy. These statements concern different evaluations: comparative fairness and satisfaction with a distribution rule. The item summaries do not establish an independent statistical relationship between income equality and job satisfaction.

Table 1. Reported percentages for income-equality statements.

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
My income feels fair compared to my colleagues in the cooperative.	7.1	18.6	8.6	45.7	20.0
I am satisfied with the income distribution policy in our cooperative.	2.9	10.0	5.7	55.7	25.7
The income equality in our cooperative contributes to my job satisfaction.	5.7	25.7	14.3	48.6	5.7
I believe income equality in our cooperative reduces workplace conflicts.	0.0	10.0	14.3	67.9	7.8
My financial needs are adequately met by my earnings from the cooperative.	2.9	22.9	12.9	55.7	5.7
The income structure in our cooperative motivates me to perform better.	7.1	18.6	8.6	45.7	20.0
I feel the income I receive reflects the effort and skills I bring to my role.	2.9	10.0	5.7	55.7	25.7

Note: Values are percentages. Valid item denominators and weighting were not documented; numerical consistency is assessed in Appendix A. Percentages are provisional pending count-level verification. Source: survey percentage tabulations.

4.3. Skill development

Table 2 presents the skill-development responses. The displayed agreement categories sum to 68.6% for access to ample development opportunities and 74.3% for the statement that development opportunities enhance job satisfaction. Endorsing the latter statement records a perceived contribution. It does not measure the effect of a training intervention or establish a relationship between independently scored learning and satisfaction constructs.

Table 2. Reported percentages for skill-development statements.

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
The cooperative offers ample opportunities for skill development.	5.7	7.1	18.6	61.4	7.2
I have improved my skills significantly since joining the cooperative.	4.3	14.3	22.8	50.0	8.6
Skill development opportunities in our cooperative enhance my job satisfaction.	5.7	5.7	14.3	68.6	5.7
Our cooperative prioritizes continuous learning and skill advancement.	0.0	8.6	17.8	48.0	25.6
I feel equipped to handle my job responsibilities due to the training provided.	1.4	2.9	2.9	55.7	37.1
The skills I've gained in the cooperative have increased my confidence in my role.	0.0	28.6	7.1	45.7	18.6

Continued table:

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Regular training sessions in the cooperative contribute to my professional growth.	5.7	22.9	21.4	34.3	15.7

Note: Values are percentages. Valid item denominators and weighting were not documented; numerical consistency is assessed in Appendix A. Percentages are provisional pending count-level verification. Source: survey percentage tabulations.

4.4. Job creation

Table 3 presents the employment-contribution responses. The displayed agreement categories sum to 77.2% for a strong record of creating new job opportunities and 82.8% for a perceived contribution to community well-being. These statements do not quantify jobs created, distinguish gross from net employment growth, or document changes in members' contractual security.

Table 3. Reported percentages for job-creation statements.

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
The cooperative has a strong record of creating new job opportunities.	0.0	15.7	7.1	65.7	11.5
Job creation by our cooperative positively impacts my sense of job security.	2.9	8.6	18.6	61.4	8.6
I feel the cooperative's efforts in job creation enhance community well-being.	2.9	5.7	8.6	61.4	21.4
The job creation rate in our cooperative is satisfactory.	1.4	8.6	11.4	70.0	8.6
Job creation initiatives of the cooperative align with my expectations.	0.0	4.3	1.8	63.9	30.0
The growth in job opportunities in the cooperative makes me feel more satisfied with my job.	4.3	27.1	14.3	42.9	11.4
I am proud of the cooperative's role in providing employment to the community.	0.0	15.7	7.1	65.7	11.5

Note: Values are percentages. Valid item denominators and weighting were not documented; numerical consistency is assessed in Appendix A. Percentages are provisional pending count-level verification. Source: survey percentage tabulations.

4.5. Cooperative resilience

Table 4 presents the resilience responses. The displayed agreement categories sum to 73.4% for adapting to economic challenges, 82.1% for a contribution to job stability, and 84.4% for reassurance about withstanding market fluctuations. These provisional summaries describe responses to different statements, rather than an objectively measured resilience score. They cannot establish whether greater organizational resilience is associated with higher job satisfaction.

Table 4. Reported percentages for cooperative-resilience statements.

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Our cooperative has the ability to adapt to the different economic challenges.	2.9	8.0	15.7	63.4	10.0

Continued table:

Statement	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
The resilience of our cooperative contributes to my job stability.	4.3	5.0	8.6	56.4	25.7
I am confident in the cooperative's ability to sustain its operations during hard times.	1.4	11.4	12.9	58.6	15.7
The cooperative's resilience positively impacts my job satisfaction.	4.3	20.0	11.4	58.6	5.7
I feel secure in my job due to the cooperative's financial stability.	2.9	24.3	5.0	59.3	8.6
The cooperative's ability to withstand market fluctuations is reassuring.	0.0	8.6	7.0	68.7	15.7
The resilience of the cooperative assures me of its long-term success.	2.9	8.0	15.7	63.4	10.0

Note: Values are percentages. Valid item denominators and weighting were not documented; numerical consistency is assessed in Appendix A. Percentages are provisional pending count-level verification. Source: survey percentage tabulations.

4.6. Perceived outcomes attributed to job satisfaction

Figure 5 presents the distribution of perceived outcomes attributed to job satisfaction: increased productivity (51.0%), lower absenteeism (21.6%), lower turnover (11.4%), higher work quality (7.8%), increased engagement (5.7%), and other outcomes (2.4%). The percentages total 99.9% after rounding. These labels describe perceptions attributed to satisfaction, rather than independently measured changes in productivity, attendance, retention, or quality.

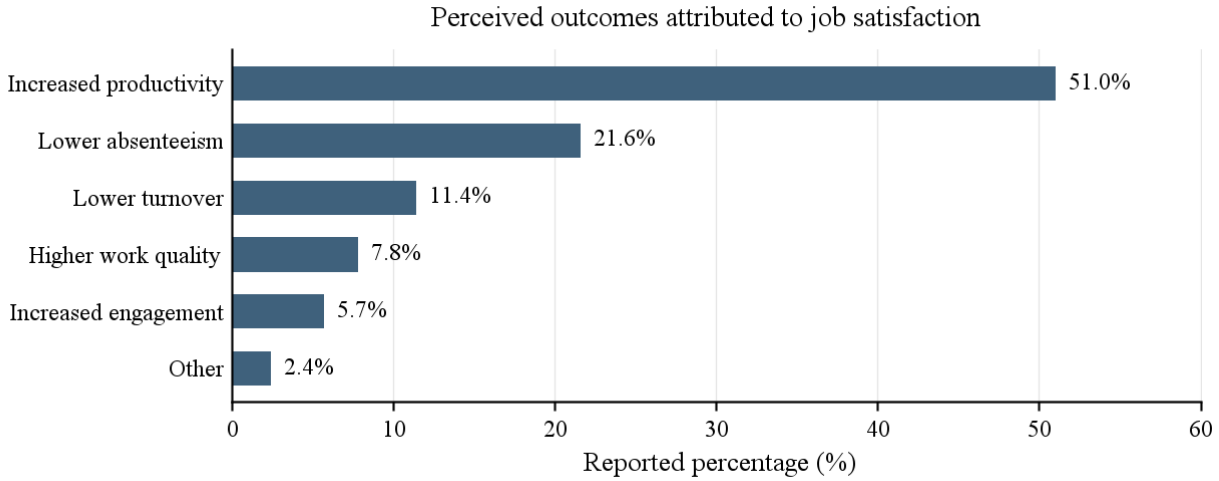


Figure 5. Perceived outcomes attributed to job satisfaction (%). Organizational outcomes were not independently measured.

4.7. Scope of the descriptive interpretation

RQ1–RQ4 organize descriptions of responses within each domain. The item summaries cannot establish whether the four domains are statistically associated with satisfaction or which domain has the greatest relative importance. Differences in item wording and unverified denominators prevent interpreting agreement percentages as comparable effect sizes. Interpretation is limited to item-level perceptions, subject to the numerical uncertainty described in Section 3.4 and Appendix A.

5. Discussion

The reported item summaries contain favorable responses concerning several cooperative practices. Because their underlying counts remain unverified, the interpretation is provisional. The income-policy statements identify distinct topics for member consultation: fairness relative to colleagues, satisfaction with distribution rules, and adequacy of earnings. This distinction is compatible with research emphasizing procedural fairness and the broader employment experience (Tortia, 2008; Becchetti et al., 2014). It does not demonstrate that fairer distribution causes higher satisfaction. The present summaries do not separate distributive rules from income levels, participation, or other possible explanations.

Skill development is another domain with favorable reported responses, but access to opportunities, perceived learning, and training-related confidence are different evaluations. Cooperative governance may expose members to varied roles; the survey does not document the training received, its duration, or subsequent competence. Studies of IT-supported HR practices and reskilling provide related organizational contexts rather than direct tests of these questionnaire statements (Papaevangelou et al., 2024; Ragazou et al., 2025). The present percentages cannot justify calling skill development the strongest predictor of satisfaction or assigning it priority over income policy or employment security.

The job-creation and resilience statements concern the organization's perceived community role and continuity. Eurofound's (2019) organizational case studies distinguish job creation and retention, whereas this questionnaire provides no verified employment counts. Members' confidence in continuity should likewise be distinguished from observed financial resilience or survival. Sector, region, cooperative size, and membership arrangements could affect such perceptions, but the participating organizations are insufficiently described to examine those explanations. The sample therefore cannot establish how experiences vary across Greek cooperative settings.

Social exchange theory provides a language for interpreting fairness, learning, and continuity as resources valued within members' organizational relationships (Cropanzano and Mitchell, 2005). It remains an interpretive framework: reciprocity and trust were not separately measured. Research on participation and helping climate in cooperative workplaces offers more specific mechanisms for future investigation (De Reuver et al., 2021), while cross-cultural participation research cautions against assuming that organizational practices have the same meaning across settings (Valverde-Moreno et al., 2019). Neither mechanism nor cross-cultural variation is tested in this survey.

Direct comparison with related empirical studies also bounds the contribution. González-Morales et al. (2023) examined responsibility and satisfaction in a particular social-economy transport company; Macassa et al. (2023) studied experiences in a Swedish work integration social enterprise. These designs address specified organizational contexts. The present questionnaire groups perceptions across four topics, but lacks verified organization-level coverage and separately validated measures. Similar themes in the literature therefore support the relevance of the questions, rather than confirmation of the present percentages or transfer of effect estimates to Greece.

5.1. Limitations

The cross-sectional design cannot establish temporal order or causality. Convenience recruitment may overrepresent accessible cooperatives, engaged members, or favorable experiences; web-based self-selection can create coverage and selection biases (Bethlehem, 2010). The recruitment channels, contact lists, survey platform, calendar dates, and procedures used to verify eligibility are not documented. Records of invitations, successful contacts, questionnaire starts, exclusions, and completion are unavailable, preventing calculation of

a response rate or exclusion count and assessment of nonresponse bias. The number of participating cooperatives, their sectoral and regional distribution, organizational sizes, and concentration of respondents within each cooperative are also unavailable. Consequently, sample coverage and organizational clustering cannot be assessed, and the achieved sample does not support national estimates or a probability-based margin of sampling error. These reporting gaps are relevant to observational-study transparency (von Elm et al., 2007).

Self-report measurement creates a risk of common-method variance when perceptions of organizational practices and satisfaction are collected from the same respondent at the same time (Podsakoff et al., 2003). Social desirability may also affect answers when respondents identify strongly with their cooperative. No reported diagnostic establishes the extent of these biases. Responses to items that explicitly connect a practice with satisfaction may additionally reflect agreement with the wording of the statement rather than an independent association between constructs.

Measurement quality and numerical accuracy impose further limitations. The original administered questionnaire, mappings to published instruments, pilot procedures, language adaptation, reverse-coding rules, and treatment of incomplete responses were not documented. Scale reliability and factor-analytic validity are not established, and the mixed wording does not establish four unidimensional scales plus an independent satisfaction measure. **Table A1** identifies identical response profiles and 70 percentage cells incompatible with a common unweighted denominator of 382. Without original counts and item denominators, the reasons cannot be resolved. The respondent-profile figures and the perceived-outcomes chart also lack verified counts; the wording and selection rule for the outcomes question were not documented. These uncertainties limit interpretation of the descriptive percentages.

Finally, the study does not compare members with non-members or workers in conventional firms. It cannot isolate an ownership effect from sector, education, tenure, or organizational characteristics. Future studies could combine documented recruitment, separately validated measures, organizational employment records, and repeated observations, with analysis accounting for respondents nested within cooperatives. Comparative and longitudinal designs would help distinguish contextual differences from changes in members' work experiences.

5.2. Implications for human resource practice

The questionnaire topics offer a practical agenda for consultation without implying measured intervention effects. A cooperative could ask members separately whether income rules are clear, whether earnings are adequate, and whether different roles are treated fairly. Learning discussions could distinguish access to training from relevance to current responsibilities. Questions about employment contribution could be considered alongside actual recruitment and retention records, while continuity discussions could identify what information members need about organizational plans. Such consultation would produce new evidence; the current survey does not show that these actions increase satisfaction.

Participation in these discussions should include members with differing roles and lengths of membership rather than relying only on the most accessible voices. Comparisons of future results would require stable wording, known item denominators, and protection of respondents from identification within small organizations. Managers should not use the reported agreement percentages to calculate financial returns or set a ranked investment priority across the four domains. The present contribution is to identify distinct questions for HR dialogue and subsequent evaluation.

6. Conclusions

This descriptive study organizes perceptions of income fairness, skill development, employment contribution, and cooperative continuity among 382 worker-members in Greece. The item summaries contain favorable evaluations of several practices, but discrepancies between the percentages and the stated sample size prevent treating them as numerically verified findings. The study does not estimate statistical associations, rank the four domains, or demonstrate effects of cooperative ownership. Its contribution is a contextual account of the questionnaire domains with explicit limits on the interpretation of the descriptive evidence.

For practice, these domains can structure member consultation about distribution rules, learning access, employment prospects, and continuity. The survey does not establish returns to interventions or justify prioritizing one domain. Stronger empirical conclusions require verified original counts and item denominators, a documented instrument and recruitment process, and psychometric evidence for any composite measures. Longitudinal and comparative designs could then assess how member experiences differ across sectors, regions, and organizational sizes.

Author contributions: Conceptualization, Stavros Kalogiannidis, Stamatis Kontsas, Fotios Chatzitheodoridis and Olympia Papaevangelou; methodology, Stavros Kalogiannidis and Stamatis Kontsas; formal analysis, Stavros Kalogiannidis; investigation, Stavros Kalogiannidis and Olympia Papaevangelou; data curation, Stavros Kalogiannidis and Olympia Papaevangelou; writing—original draft preparation, Stavros Kalogiannidis; writing—review and editing, Stamatis Kontsas, Stavros Kalogiannidis, Fotios Chatzitheodoridis and Olympia Papaevangelou; visualization, Stavros Kalogiannidis; supervision, Fotios Chatzitheodoridis and Stamatis Kontsas; project administration, Stavros Kalogiannidis. All authors have read and agreed to the published version of the manuscript.

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Ethics approval: The study was approved by the Research Ethics and Deontology Committee of the University of Western Macedonia on 3 November 2025 (protocol number 166/2026). This approval applies to the present survey of employees who were also members of worker cooperatives in Greece. All participants provided electronic informed consent through a mandatory checkbox before accessing the survey questions.

Data availability: The data supporting this study are available exclusively from the corresponding author upon reasonable request.

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Conflict of interest: The authors declare no conflict of interest.

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Appendix A. Numerical consistency of the descriptive summaries

The assessment concerns the 28 five-category item distributions in **Tables 1–4**. For each displayed percentage, all integer counts from 0 to 382 were evaluated using $p = \text{round}(100 \times n / 382, 1)$, where n is a category count. A cell was classified as incompatible when none of these counts reproduced the displayed percentage. This is a check of the stated common unweighted denominator, rather than a reconstruction of the response data.

Table A1 summarizes the results. Seventy of 140 cells were incompatible with this assumption. Four pairs of items had identical five-category profiles; identical profiles alone do not establish a transcription error or invalidate either item. Different item-specific denominators or weighting could explain some discrepancies, but neither was documented. Category frequencies and valid denominators are required to determine the correct percentages.

Table A1. Numerical consistency of the item-level percentage distributions.

Domain	Items	Cells checked	Incompatible cells	Identical five-category profiles
Income equality	7	35	22	Items 1 and 6; Items 2 and 7
Skill development	7	35	19	None
Job creation	7	35	13	Items 1 and 7
Resilience	7	35	16	Items 1 and 7
Total	**28**	**140**	**70**	**Four pairs**

Note: Item numbers refer to their order within each corresponding table. Income-equality item 5, job-creation item 2, and resilience item 5 each total 100.1%; all other item rows total 100.0%. Totals of 100.1% can result from rounding and are distinct from the individual-cell compatibility test. The percentage distributions were not altered, and no respondent-level records or replacement frequencies were generated.