

“Internal marketing in higher education: An initial exploratory analysis of an extended item set”

AUTHORS	Aušrinė Greičiūtė-Solovejė  
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Aušrinė Greičiūtė-Solovejė, Ph.D.
Candidate, Researcher at the Social
Inclusion and Leadership Research
Laboratory, Mykolas Romeris
University, Lithuania.



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Aušrinė Greičiūtė-Solovejė (Lithuania)

INTERNAL MARKETING IN HIGHER EDUCATION: AN INITIAL EXPLORATORY ANALYSIS OF AN EXTENDED ITEM SET

Abstract

Internal marketing is widely discussed, but its assessment remains fragmented, particularly in higher education institutions. This study aims to identify relevant aspects of internal marketing in higher education institutions, develop an extended item set, and conduct an initial exploratory analysis. Data were collected in January–February 2026 from a convenience sample of 105 respondents from Lithuanian higher education institutions.

The initial set comprised 55 items: 42 covered employee-oriented domains derived from the 11-item internal marketing framework, and 13 addressed management support, internal procedures, and employee appraisal. Principal component analysis suggested a provisional six-component structure, and 33 items were retained in the provisional item set. The Kaiser–Meyer–Olkin measure was 0.903, Bartlett's test of sphericity was significant ($p < 0.001$), and the total explained variance was 73.94%. The overall internal consistency was high (Cronbach's $\alpha = 0.965$), although this value may also indicate possible item redundancy.

Given the small sample relative to the initial number of items, the convenience sampling strategy, and the incomplete analytical record of the item-reduction process, the findings should be interpreted as preliminary exploratory evidence rather than as validation of a measurement instrument. The proposed six-component structure should be regarded as unstable and sample-dependent and should be re-evaluated through exploratory factor analysis and confirmatory factor analysis using substantially larger, independent samples. Potential differences among respondent groups were not examined. The results suggest that internal marketing in higher education institutions may encompass traditional employee-oriented aspects, management support, and procedural clarity.

Keywords

internal marketing, management, higher education
institutions, item-set development

JEL Classification

I23, M31, M12

INTRODUCTION

HEIs operate in a dynamic, challenging environment where stakeholders' expectations and demands for better research outcomes, teaching quality, public engagement, and institutional effectiveness are continually increasing (Miotto et al., 2020). Competitive advantage has become crucial, as HEIs constantly compete for students, researchers, funding, projects, and international visibility (Azizi & Sassen, 2023). These conditions increase the role of internal organizational processes that support employee motivation, coordination, communication, and commitment to institutional goals.

In this context, internal marketing is relevant not only as a broad management concept but also as a measurement problem. In HEIs, internal marketing refers to organizational actions through which institutions support employees. However, empirical assessments of these actions remain fragmented, particularly because many existing

instruments were developed in business or general service contexts and do not fully reflect the procedural complexity of HEIs. Lithuanian HEIs provide a relevant context for examining this issue because they operate in a competitive higher education system in which universities and colleges face pressures related to student recruitment, research performance, quality assurance, international visibility, and changing academic workloads. In such institutions, employees' experiences are shaped not only by internal communication, compensation, or professional development, but also by formal procedures and appraisal systems.

The scientific issue this study addresses is the insufficient contextual adaptation of internal marketing measurement in HEIs. Accordingly, this study focuses on developing and initially exploring an extended internal marketing item set that reflects the specific context of higher education.

1. LITERATURE REVIEW

1.1. Conceptualization and measurement of internal marketing in HEIs

The concept of internal marketing emerged in the 1970s as a way to improve service quality (Rafiq & Ahmed, 2000) and increase external customer satisfaction (Flipo, 1986). Over time, internal marketing has evolved into a strategy in which employees are viewed as the organization's internal customers, and meeting their needs is linked to the organization's ability to deliver high-quality services to external customers (Foreman & Money, 1995; Ewing & Caruana, 1999).

Previous studies associate internal marketing with employee job satisfaction, motivation, and talent retention (Bohnenberger et al., 2019; Pham et al., 2024), organizational performance (Elshaer et al., 2024), and organizational culture and employee behavior (Teetzen et al., 2023). Moreover, it is worth mentioning organizational commitment and loyalty (Nguyen & Ha, 2023; Serafim et al., 2024), pride in one's work and organization (Lu & Roto, 2016), and organizational citizenship behavior (Dubey et al., 2023). The literature examines external outcomes such as service quality, customer satisfaction and loyalty, competitive advantage, and institutional reputation (de Bruin et al., 2021; Sohail & Jang, 2017; Nguyen et al., 2024; Mulyono et al., 2020; Azizi & Sassen, 2023).

The theoretical framework of this study is grounded in social exchange theory, according to which organizational investment in employees may generate reciprocal employee commitment and be-

havior. Material and non-material organizational support (including compensation, development opportunities, communication, management support, recognition, and work-life balance) may signal how much the organization values its employees (Qaisar & Muhamad, 2021). This perspective supports the inclusion of both resource- and relationship-based aspects in the proposed item set.

One of the main problems in the internal marketing literature is the lack of consistency in the conceptualization and measurement of the construct (Kaur & Sharma, 2015; Bohnenberger et al., 2019; Qaisar & Muhamad, 2021; Azizi & Naeli, 2024). Previous studies identify dimensions such as career opportunities, empowerment, management support, working conditions, compensation, institutional vision, internal communication, employee development, internal procedures, and performance appraisal (Panigyrakis & Theodoridis, 2009; Yildiz & Kara, 2017; Qaisar & Muhamad, 2021; Sun et al., 2020). Employee training and development, internal communication, and recognition and reward systems are among the most frequently discussed aspects.

Yildiz and Kara (2017) developed the IM-11 scale, which covers physical working conditions, basic employee needs, empowerment, work-life balance, organizational vision, training and development, career opportunities, fairness, communication, participation in decision-making, and compensation. These domains formed the main conceptual basis for the proposed item set. However, IM-11 does not clearly distinguish management support, internal procedures, and employee appraisal, which may be particularly relevant in HEIs. Therefore, the framework was extended to include these aspects.

The study aims to identify internal marketing dimensions relevant to HEIs and to develop and conduct an initial exploratory analysis of an extended item set. The resulting structure is treated as provisional and requires further evaluation through EFA and CFA using larger, independent samples.

This study addresses the main research gap: the lack of a context-sensitive item set for assessing internal marketing in HEIs. To address this gap, the following research questions are proposed:

RQ1: Which internal marketing dimensions can be theoretically identified as relevant to HEIs?

RQ2: Which dimensions are empirically suggested by the exploratory analysis?

RQ3: What preliminary dimensional structure can be proposed for the extended item set?

2. METHOD

The study employed a quantitative survey design combined with a narrative literature review. The research process included adaptation of the IM-11 conceptual framework, inclusion of additional HEI-specific content, a quantitative survey of academic and administrative employees, exploratory PCA, and assessment of internal consistency.

The initial item set consisted of 55 items. Its development was guided by the IM-11 framework proposed by Yildiz and Kara (2017): physical working conditions, basic employee needs, empowerment, work-life balance, institutional vision, training and professional development, career opportunities, fairness, internal communication, participation in decision-making, and compensation. No items were copied directly from the IM-11 scale. Instead, all 55 items were newly formulated in Lithuanian and conceptually adapted to the context of Lithuanian HEIs. Of these, 42 represented the core employee-oriented domains, while 13 additional items addressed management support, internal procedures, and employee appraisal.

Before the empirical analysis, the initial item set was theoretically organized around physical working conditions, basic employee needs and

compensation, empowerment, work-life balance, institutional vision, training and professional development, career opportunities, fairness and recognition, internal communication, participation in decision-making, management support, procedural clarity, and employee appraisal. The wording of the items was adapted to the context of HEIs to reflect institutional structures, administrative procedures, and staff evaluation.

The available study records document the item-development process at the domain level but do not preserve a prospective item-by-item blueprint, item-specific literature sources, or a formal wording-development protocol. They also do not document a formal duplicate-content screening procedure. Consequently, the exact initial allocation and theoretical justification of every item cannot be reconstructed retrospectively, which limits the replicability of the item-generation process.

The questionnaire was prepared in Lithuanian, which was the language of data collection. Since the items were newly formulated rather than directly translated from the IM-11 scale, a formal back-translation procedure was not applicable. Responses were recorded using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Before data collection began, experts in relevant fields reviewed the questionnaire and tested it with a small group of HEI staff to assess clarity and relevance. The expert panel consisted of 10 experts with expertise in internal marketing, higher education management, and human resources. Based on the expert review, unclear items were revised, and no items were removed. The available documentation indicates that the expert review was qualitative. It does not preserve the number of experts representing each field, their detailed qualifications and selection criteria, the size and composition of the pilot group, standardized item-rating forms, or the exact number and type of revisions. CVI, CVR, and inter-rater agreement indices were not calculated. The expert review should therefore be interpreted as an assessment of clarity and contextual relevance rather than as quantitative evidence of content validity.

The empirical data were collected in Lithuania in January–February 2026. The study involved 105 employees from 25 Lithuanian higher education institutions, including universities and colleges.

Respondents were classified according to their reported main position as lecturers ($n = 48$), researchers ($n = 20$), or administrative employees ($n = 37$) for descriptive reporting. The three groups were combined for the main analysis because their subgroup sizes were insufficient for stable group-specific analyses. No separate analyses by employee group were performed. The survey was disseminated via social media platforms and distributed directly to respondents, using convenience sampling. This sampling approach was selected because the study aimed to obtain preliminary empirical evidence for internal marketing item-set development and exploratory assessment.

Since all questions in the online survey were mandatory, the dataset contained no missing data. The response rate could not be calculated because the survey link was disseminated via social media and direct forwarding, and the total number of

individuals who received the invitation could not be ascertained. Responses were collected anonymously, and the number of respondents from each institution could not be determined. Table 1 presents the characteristics of the respondents.

The sample was dominated by university employees (90.5%). Most respondents worked either on the organization's premises (43.8%) or in a hybrid mode (43.8%). Consequently, the findings should be generalized to all HEIs with caution.

Data analysis was performed using SPSS 24.0. First, descriptive statistics were calculated: nominal variables were presented as frequencies and percentages, while interval variables were presented as means and standard deviations. Exploratory analysis was then conducted to examine the underlying component structure of the item set. The analysis was performed using

Table 1. Demographic characteristics of the respondents

Demographic factors		n	Percentages
Age	18–25 years	10	9.5
	26–30 years	11	10.5
	31–40 years	25	23.8
	41–45 years	14	13.3
	46–50 years	11	10.5
	51–55 years	12	11.4
	56–60 years	9	8.6
	61 years and above	10	9.5
	Not specified	3	2.9
Gender	Male	28	26.7
	Female	70	66.6
	Preferred not to disclose	7	6.7
Type of higher education institution	University	95	90.5
	College	8	7.6
	Not specified	2	1.9
Work experience in the current institution	Up to 1 year	11	10.5
	1–2 years	18	17.1
	2–5 years	31	29.5
	5–10 years	11	10.5
	10–20 years	12	11.4
	More than 20 years	20	19.1
	Not specified	2	1.9
Work arrangement	Working on the organization's premises	46	43.8
	Working remotely	12	11.4
	Working in a hybrid mode	46	43.8
	Not specified	1	1.0
Main position	Lecturer	48	45.7
	Researcher	20	19.1
	Administrative employee	37	35.2

Note: Percentages are reported to one decimal place and adjusted for rounding where necessary so that the percentages within each demographic factor total 100.0%.

PCA with Varimax rotation and Kaiser normalization. PCA was used as an exploratory data-reduction procedure and should not be interpreted as common-factor EFA or as confirmation of a latent measurement model. The suitability of the data for component analysis was assessed using the Kaiser–Meyer–Olkin (KMO) measure and Bartlett’s test of sphericity. Items with primary component loadings below 0.40 were considered for removal. The archived analytical records do not preserve sufficiently detailed information to establish additional numerical item-removal thresholds for communalities or cross-loadings. The archived output indicates that communalities were examined and that no item retained in the final solution had a communality below 0.20. However, individual communalities, the complete rotated component matrix, and item-level cross-loadings were not preserved. No numerical cross-loading threshold or complete record of the component-retention criteria was documented.

The item removal procedure was iterative: after problematic items were removed, the analysis was rerun, and the component solution was reassessed. However, the sequence of analytical iterations and the item-specific loadings, cross-loadings, and communalities at each iteration were not preserved in the available records. Therefore, the item-elimination process can be reconstructed only partially. The available elimination information is transparently presented in Table 2. Internal consistency was assessed using Cronbach’s alpha. Cronbach’s alpha was interpreted exclusively as an indicator of internal consistency and not as evidence of construct validity.

Given the sample size of $n = 105$ and the initial 55-item set, the analysis should be interpreted as preliminary and exploratory. The respondent-to-item ratio was approximately 1.9:1, which is insufficient for the stable development of a new multidimensional item set. Consequently, the resulting six-component structure may be strongly sample-dependent and should not be regarded as a validated measurement model. Therefore, further studies should repeat the analysis using common-factor EFA in a substantially larger development sample and subsequently conduct CFA in a separate, independent validation sample.

Participation was voluntary, and participants were informed about the study objectives, confidentiality, and their right to withdraw at any time. No directly identifying data were collected.

3. RESULTS

The initial PCA was conducted using the full set of 55 questionnaire items. The analysis was exploratory and aimed to identify a preliminary component structure rather than confirm a predefined measurement model. The initial 55-item analysis produced a ten-component solution. The suitability of the initial item set for component analysis was indicated by $KMO = 0.814$ and Bartlett’s test of sphericity, $\chi^2 = 4774.196$, $df = 1485$, $p < 0.001$. The total explained variance of the initial solution was 78.33%, and the overall internal consistency was very high (Cronbach’s $\alpha = 0.974$). Items were removed iteratively based on their primary component loadings and the interpretability of the resulting component solution. In total, 22 items were removed from the initial 55-item set: items 4, 5, 7, 12, 13, 14, 15, 16, 20, 21, 25, 28, 29, 30, 32, 36, 38, 39, 40, 47, 48 and 52.

Items 7 and 25 had primary component loadings below the predetermined threshold of 0.40: item 7 loaded at 0.384, and item 25 loaded at 0.353. As a result, 33 items were retained in the preliminary item set. For the remaining 20 items, the exact iteration, cross-loading, communality, and item-specific removal criterion were not preserved in the available analytical records. The final 33-item PCA solution suggested a provisional six-component structure. The suitability of the data for component analysis was indicated by the Kaiser–Meyer–Olkin measure ($KMO = 0.903$) and Bartlett’s test of sphericity ($\chi^2 = 2797.532$; $df = 528$; $p < 0.001$). The total explained variance was 73.94%. The overall internal consistency of the retained 33-item set was very high (Cronbach’s $\alpha = 0.965$). This coefficient should be interpreted cautiously because a very high alpha may indicate item redundancy and does not establish the validity or unidimensionality of a multidimensional item set.

The six provisional components identified in the final solution were compensation, evaluation and

Table 2. Available item-level elimination information

Item	Initial component	Initial primary loading	Available reason for removal
4	C10	0.626	Not documented ¹
5	C10	0.693	Not documented ¹
7	C3	0.384	Primary component loading below 0.40
12	C7	0.456	Not documented ¹
13	C6	0.570	Not documented ¹
14	C4	0.787	Not documented ¹
15	C4	0.757	Not documented ¹
16	C4	0.570	Not documented ¹
20	C7	0.808	Not documented ¹
21	C7	0.677	Not documented ¹
25	C6	0.353	Primary component loading below 0.40
28	C2	0.598	Not documented ¹
29	C2	0.597	Not documented ¹
30	C3	0.505	Not documented ¹
32	C3	0.721	Not documented ¹
36	C1	0.784	Not documented ¹
38	C1	0.719	Not documented ¹
39	C1	0.842	Not documented ¹
40	C1	0.826	Not documented ¹
47	C3	0.574	Not documented ¹
48	C8	0.422	Not documented ¹
52	C1	0.455	Not documented ¹

Note: ¹The archived records confirm that the item was removed during the subsequent reduction process but do not preserve the exact iteration or item-specific statistical or conceptual criterion.

career, empowerment and internal communication, management support, institutional vision and professional development, clarity of internal procedures, and physical working conditions. Table 3 reports only the highest archived rotated loading for each item. It is not a complete rotated component matrix because cross-loadings and item-level communalities were not preserved.

All retained items exceeded the 0.40 primary loading threshold. The strongest primary loadings were observed for items related to physical working conditions and management support. After removing the items and rerunning the PCA, Cronbach's α remained very high (0.965). Cronbach's α coefficients were calculated to assess the internal consistency of the overall item set and each provision-

Table 3. Primary rotated component loadings and explained variance in the provisional 33-item solution (n = 105)

Component	Item Number	Items	Primary component loading	Variance explained by component (%)
C1 Compensation, Evaluation, and Career	8	I am satisfied with my current salary	0.799	16.62
	42	I am properly recognized for my achievements at the institution	0.761	
	26	I am satisfied with my career progress at this institution	0.670	
	24	The institution cares about my career opportunities	0.646	
	41	The institution rewards high-performing employees	0.627	
	6	The institution meets my basic needs (adequate compensation, physical safety, and well-being)	0.625	
	23	The institution provides opportunities to participate in professional development training and conferences abroad	0.593	
	55	I believe I am evaluated fairly within the institution	0.560	
	27	I believe the institution treats all employees equally and fairly	0.494	

Table 3 (cont.). Primary rotated component loadings and explained variance in the provisional 33-item solution (n = 105)

Component	Item Number	Items	Primary component loading	Variance explained by component (%)
C2 Empowerment and Internal Communication	35	The institution involves me in decision-making	0.771	14.63
	9	The institution empowers employees to make decisions and perform their work independently	0.729	
	11	The institution encourages me to express my opinion	0.712	
	33	Communication between departments is effective	0.621	
	10	The institution's decisions and actions encourage my voluntary participation in organizational activities	0.612	
	37	The institution's administration and management take my suggestions into account	0.603	
	34	Communication within the institution is timely	0.559	
	31	I am satisfied with internal institutional communication and the manner of interaction	0.493	
C3 Management support	46	My supervisor makes an effort to support and motivate me	0.780	12.49
	44	Management helps resolve conflict situations	0.769	
	45	Management provides the necessary assistance in resolving work-related problems	0.737	
	43	I receive sufficient support from management while performing my duties	0.659	
	53	I am satisfied with how I am generally valued within the institution	0.532	
C4 Institutional vision and professional development	19	The institution's vision is clear to me	0.748	11.24
	17	The institution's vision, mission, and goals empower me to work in accordance with my professional calling	0.713	
	18	The institution presents a vision and goals that are being implemented	0.672	
	22	The institution ensures sufficient funding for professional development	0.578	
C5 Clarity of internal procedures	51	The institution organizes meetings to explain policies and procedures	0.808	9.56
	54	When I started working, I received detailed information about the employee evaluation system	0.750	
	50	The institution's internal procedures do not hinder my work	0.657	
	49	When I started working, I received clear information about my duties and responsibilities	0.591	
C6 Physical working conditions	2	I am satisfied with the physical working conditions at the institution	0.879	9.38
	1	The institution provides me with attractive physical working conditions (modern premises, work tools, and equipment)	0.855	
	3	My workspace is modern and functional	0.759	

Note: Component-level percentages of explained variance are rounded to two decimal places; therefore, their sum may differ slightly from the total explained variance calculated from the unrounded values.

al component. However, these estimates may be sample-dependent because the same small sample was used both to derive the component structure and to estimate internal consistency.

Because the same small sample was used to derive the component solution and estimate internal consistency, these coefficients should be interpreted as preliminary and sample-dependent. Table 4 shows

Table 4. Internal consistency of the retained questionnaire components (n = 105)

Components	Number of items	Cronbach's α
Overall item set	33	0.965
Component C1	9	0.908
Component C2	8	0.931
Component C3	5	0.911
Component C4	4	0.865
Component C5	4	0.822
Component C6	3	0.891

that all provisional components demonstrated high internal consistency, with Cronbach's alpha coefficients ranging from 0.822 to 0.931, while the overall 33-item set yielded an alpha of 0.965.

4. DISCUSSION

The results suggest that internal marketing in HEIs may be a multidimensional construct that includes physical working conditions, the fulfillment of employee needs, empowerment, involvement in decision-making, the communication of the organization's vision, employee training and development programs, career opportunities, fair treatment, clear internal communication, and employee rewards and incentives. These exploratory findings are broadly consistent with previous internal marketing studies and with the logic of the IM-11 scale proposed by Yildiz and Kara (2017), particularly in relation to compensation, communication, empowerment, professional development, career opportunities, fairness, and working conditions. They are also consistent with broader internal marketing conceptualizations in which compensation and recognition, employee development, communication, empowerment, management support, working conditions, and internal procedures are repeatedly identified as relevant dimensions (Panigyrakis & Theodoridis, 2009; Kaur & Sharma, 2015; Qaisar & Muhamad, 2021; Sun et al., 2020). The exploratory results suggest that internal marketing in HEIs may also involve procedural and managerial dimensions that are not clearly distinguished in the original IM-11 framework. However, the proposed six-component structure cannot be considered confirmed on the basis of the present sample.

The first provisional component (compensation, evaluation, and career) includes internal marketing aspects related to employee needs, compensation, recognition, fairness, and career development. In HEIs, these aspects are important because academic and administrative staff evaluate their experience at the institution not only in terms of compensation but also in terms of recognition of achievements, perceived fairness, and opportunities for professional and career growth. Compared with the original IM-11 framework, this component may be interpreted provisionally as a combined dimension encompassing compensation,

recognition, fairness, and career-related aspects. Yildiz and Kara (2017) also include compensation, career opportunities, and fair treatment within the IM-11 framework, although these aspects are represented as separate domains. The present exploratory solution therefore suggests that, in this sample, these related aspects may cluster with recognition within a broader compensation, evaluation, and career component.

The second provisional component (empowerment and internal communication) includes participation in decision-making, autonomy, opportunities to express opinions, and communication between departments. This finding is consistent with previous internal marketing studies, which identify communication and empowerment as key aspects of internal marketing. In particular, Yildiz and Kara (2017) distinguish employee empowerment, participation in decision-making, and open communication as separate internal marketing domains, whereas the present analysis grouped these aspects within a single provisional component. This pattern is also consistent with broader conceptualizations emphasizing empowerment and internal communication (Panigyrakis & Theodoridis, 2009; Qaisar & Muhamad, 2021; Sun et al., 2020). In HEIs, this component may be particularly relevant, as employees often work across different academic departments, divisions, and administrative structures. Effective communication and participation in decision-making may strengthen staff engagement and their perception that they are treated as internal stakeholders.

The third provisional component (management support) emerged as a distinct component in the present sample. This finding suggests a potential extension of the IM-11 framework, as support from supervisors and management in HEIs may warrant separate consideration as an element of internal marketing. Management support has also been identified within broader internal marketing conceptualizations (Qaisar & Muhamad, 2021; Sun et al., 2020), while it is not clearly distinguished as a separate domain in the IM-11 framework. Its emergence as a distinct component in the present analysis therefore provides preliminary support for considering management support separately in the higher education context. Employees may have professional independence in teaching

or research but still depend on management for conflict resolution, workload coordination, access to institutional information, and support in addressing work-related problems.

The fourth provisional component (institutional vision and professional development) encompasses a clear institutional vision, mission, and goals, as well as support for professional development. This component is broadly consistent with the internal marketing literature, which emphasizes the importance of organizational vision and staff development. In HEIs, the link between institutional vision and professional development may be relevant because employees are expected to align their teaching, research, community engagement, and administrative activities with the institution's priorities. Therefore, this component may be interpreted provisionally as an adapted dimension in which organizational direction and professional development were associated in the present PCA solution.

The fifth provisional component (clarity of internal procedures) may extend the internal marketing framework in this study. This aspect encompasses explanations of institutional policies and procedures, information on duties and responsibilities, internal procedures, and the staff evaluation system. Although procedural clarity is not explicitly distinguished in the IM-11 framework, internal procedures and performance appraisal have been included in broader internal marketing conceptualizations (Panigyrakis & Theodoridis, 2009; Kaur & Sharma, 2015). The present findings therefore do not introduce an entirely new element but suggest that procedural clarity may emerge as a distinct component when internal marketing is examined in the higher education context. These aspects are particularly important in the context of HEIs, as institutional policies, workload regulations, administrative procedures, and evaluation systems directly shape employees' work experience and their perception of organizational fairness. When procedures are unclear, or evaluation systems are not sufficiently explained, employees may experience uncertainty, reduced trust, and lower job satisfaction. Therefore, the clarity of procedures may warrant consideration as a potential aspect of internal marketing in higher education.

The sixth provisional component (physical working conditions) covers satisfaction with physical working conditions, necessary resources and equipment, and workplace functionality. This component directly corresponds to the aspect of working conditions included in previous internal marketing scales, including IM-11. Its emergence as a separate component is therefore consistent with Yildiz and Kara (2017) and with other multidimensional internal marketing conceptualizations that include working conditions as a relevant organizational practice (Kaur & Sharma, 2015; Sun et al., 2020). In HEIs, physical working conditions remain relevant because employees' ability to perform teaching, research, and administrative tasks depends on adequate infrastructure, equipment, and functional workspaces.

Overall, these findings complement previous research by suggesting that internal marketing in HEIs may include both traditional employee-oriented dimensions and context-specific procedural and managerial dimensions. The main difference from earlier frameworks lies not in the presence of the core internal marketing domains themselves, but in the way several of these domains clustered together in the present sample and in the emergence of management support and procedural clarity as distinct provisional components. Thus, this study contributes to the development of the field of internal marketing measurement by adapting the IM-11 framework to the context of higher education and highlighting management support and procedural clarity as candidate aspects requiring further empirical investigation.

METHODOLOGICAL LIMITATIONS AND FUTURE VALIDATION

The main methodological limitation is the small sample relative to the initial 55-item set. With 105 respondents, the respondent-to-item ratio was approximately 1.9:1, which is insufficient for the stable development of a multidimensional measurement instrument. Consequently, the proposed six-component structure should be considered unstable, sample-dependent, and exploratory rather than conclusive. In addition, PCA was used as an exploratory data-reduction procedure and should not be interpreted as common-factor EFA or as confirmation of a latent measurement model. The

absence of a complete rotated component matrix, individual communalities, item-level cross-loadings, and a fully documented iteration-by-iteration elimination trail further limits the transparency and reproducibility of the analysis.

The item-generation and expert-review procedures also have important limitations. The available records do not provide a prospective item-by-item allocation to the intended theoretical dimensions, item-specific literature sources or theoretical justifications, a formal item-wording protocol, or documented duplicate-content screening. Similarly, the expert-review records do not specify the number of experts representing each field, their detailed qualifications and selection criteria, the exact number and types of item revisions, or standardized ratings of relevance, clarity, representativeness, and item-to-dimension alignment. As CVI, CVR, and inter-rater agreement indices were not calculated, the expert review should be interpreted as a qualitative assessment of item clarity and contextual relevance rather than as formal evidence of content validity.

Lecturers ($n = 48$), researchers ($n = 20$), and administrative employees ($n = 37$) were combined in a single sample. No group mean comparisons, separate factor analyses, group-specific reliability estimates, sensitivity analyses excluding individual groups, or measurement invariance tests were performed. These employee groups may differ in their perceptions of compensation, career opportunities, evaluation procedures, management support, institutional vision, and working conditions. Because the subgroup sizes were insufficient for reliable group-specific analyses, it remains unknown whether the provisional structure operates similarly across the three groups.

Future studies should repeat common-factor EFA using a substantially larger and more diverse development sample and subsequently conduct CFA in a separate, independent validation sample. Future research should also preserve the complete analytical output, assess convergent, discriminant, criterion, and predictive validity, and examine subgroup differences and measurement invariance where sample sizes permit.

CONCLUSION

This study aimed to identify internal marketing dimensions relevant to HEIs in Lithuania, develop an extended item set, and conduct an initial exploratory analysis based on the scientific literature and empirical data. The results suggest that internal marketing in HEIs may be represented by a multidimensional structure in the present sample. PCA suggested a provisional six-component structure comprising compensation, evaluation and career; empowerment and internal communication; management support; institutional vision and professional development; clarity of internal procedures; and physical working conditions.

The main contribution of this study is that it adapts the content of internal marketing measurement to the higher education context and suggests management support and procedural clarity as potentially relevant aspects requiring further examination. The findings suggest that future internal marketing measurement in HEIs may need to consider procedural and managerial aspects alongside commonly discussed areas such as remuneration, incentives, communication, and training. The provisional 33-item set may have practical significance for HEIs, as it may inform the development of future employee surveys. However, it should not yet be used as a validated scale or for high-stakes comparisons among institutions or employee groups.

Future research should first re-evaluate the item set and its provisional component structure using common-factor EFA in a substantially larger and more diverse development sample and subsequently conduct CFA in a separate, independent validation sample. Consequently, the present six-component solution should be regarded as unstable exploratory evidence rather than as a validated measurement instrument. The absence of the complete rotated component matrix, item-level cross-loadings, individual communalities, and a fully documented item-elimination trail further limits the interpretation and reproducibility of the findings.

AUTHOR CONTRIBUTIONS

Conceptualization: Aušrinė Greičiūtė-Solovejė.
 Data curation: Aušrinė Greičiūtė-Solovejė.
 Formal analysis: Aušrinė Greičiūtė-Solovejė.
 Funding acquisition: Aušrinė Greičiūtė-Solovejė.
 Investigation: Aušrinė Greičiūtė-Solovejė.
 Methodology: Aušrinė Greičiūtė-Solovejė.
 Project administration: Aušrinė Greičiūtė-Solovejė.
 Resources: Aušrinė Greičiūtė-Solovejė.
 Software: Aušrinė Greičiūtė-Solovejė.
 Supervision: Aušrinė Greičiūtė-Solovejė.
 Validation: Aušrinė Greičiūtė-Solovejė.
 Visualization: Aušrinė Greičiūtė-Solovejė.
 Writing – original draft: Aušrinė Greičiūtė-Solovejė.
 Writing – review & editing: Aušrinė Greičiūtė-Solovejė.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

In preparing this manuscript, the author used DeepL Translator to translate selected text from Lithuanian into English and OpenAI's ChatGPT to assist with language editing, grammatical correction, improvement of academic style, clarity, and textual consistency. These tools were not used to collect or generate data, perform or modify the statistical analyses, determine the component structure, select or eliminate questionnaire items, calculate results, or make substantive scientific decisions. All methodological choices, analyses, interpretations, results, and conclusions were developed, reviewed, and verified by the author. After using these tools, the author critically reviewed and edited the entire manuscript and assumes full responsibility for its accuracy, integrity, and final content.

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