Online ISSN 3107-5355 **Research Article**

International Journal of Agricultural Extension and Education
Year 2026, Vol.2 (1)

Beyond Membership: How Research-Extension Partnerships Transform Farmer Producer Organizations into Commercial Enterprises

Mkafula Thembalethu[1*] and **Simphiwe Mhlontlo**[2]

[1]Mkafula Thembalethu is a practitioner in agricultural extension and rural development, with a focus on innovation systems

***Correspondence:** <mkafulapeterson@yahoo.com>

DOI: https://doi.org/10.48165/ijae.2026.2.01.01

ABSTRACT

Farmer Producer Organizations (FPOs) have been promoted for three decades as vehicles for smallholder commercialization, with over R32.3billion invested since 2010. Yet meta analyses show that 70–80% of African FPOs remain non functional businesses, serving primarily as channels for input distribution rather than profitable enterprises. This systematic review synthesizes evidence from 2000–2025 on a paradigm shift where research and extension partnerships reframe FPOs as businesses requiring CEO level capabilities rather than farmer groups. Based on 16 studies across countries, four critical capabilities emerge: governance, financial management, market intelligence, and leadership. Evidence shows that FPOs supported by business oriented extension achieve 40–90% higher member income and three times higher survival rates compared to agronomy focused models. Case studies from Uganda, India, and Ethiopia confirm that business coaching and market brokerage transform FPOs into commercial enterprises. We propose a new typology of extension roles: mobilizer, technical trainer, business coach, and market broker. Key gaps include absence of curricula for business skills, lack of KPIs tied to profitability, and disconnect between agricultural research and agribusiness models. Scaling commercialization requires reforming extension institutions, hiring staff with business backgrounds, and measuring success by FPO balance sheets rather than membership counts. This review concludes that transforming extension roles is essential for FPOs to evolve into sustainable commercial enterprises.

Keywords: Agribusiness; Agricultural Extension; Collective Action; Cooperatives; Farmer Producer Organization; Governance; Leadership; Markets; Smallholder Commercialization

INTRODUCTION

The R32.3billion Paradox

Global donor investments exceeding R32.3billion have prioritized FPOs, yet evidence shows 70–80% remain non-functional businesses (Battala et al., 2026). Studies confirm that most FPOs serve as input distribution channels rather than profit-oriented enterprises (Yadav, Paliwal & Wadkar, 2024). This paradox reflects systemic failures in extension models that emphasize group formation over commercialization (Mbatha, 2024). Case evidence from Uganda shows that producer organizations collapse when donor support ends, highlighting weak sustainability (Hill, Maruyama & Frölich, 2021). Comparative reviews emphasize that FPOs succeed only when extension integrates business coaching and market brokerage (Sheshagiri et al., 2026). Evidence from India's cooperative models demonstrates that commercialization requires governance and financial management, not just aggregation (Food and Land Use Coalition, 2024). Scholars argue that donor timelines of three years are insufficient for businesses that require 7–10 years to mature (Conradie, 2020). Reviews confirm that current KPIs measuring "groups formed" fail to capture profitability (Chambers Global Practice Guides, 2025). Institutional incentives further perpetuate failure by rewarding mobilization rather than profitability (dos Santos, Viviers & Venter, 2024). Collectively, the R32.3billion paradox underscores the need for a new theory of change in FPO commercialization.

The Wrong Theory of Change

The traditional theory of change assumed that economies of scale from grouping farmers would automatically lead to commercialization (Hill et al., 2021). Evidence shows that aggregation alone does not create competitiveness without governance and financial systems (Sheshagiri et al., 2026). Case studies confirm that FPOs often lack business plans, resulting in collapse after donor exit (Mbatha, 2024).

Reviews highlight that agronomy-focused extension ignores business complexity, leaving FPOs unable to negotiate contracts (Yadav et al., 2024). Evidence from Ethiopia's commercialization clusters shows success only when trained in quality standards and cost accounting (Food and Land Use Coalition, 2024). Scholars argue that commercialization requires business development services, not just technical training (PwC, 2025). Comparative evidence shows that FPOs with business coaching achieve higher survival rates than those relying on agronomy extension (Conradie, 2020). Donor projects often prioritize short-term outputs such as training sessions rather than long-term profitability (South African Government, 2025). Reviews confirm that ignoring business models perpetuates systemic failure in FPO commercialization (KZN DARD, 2026). Collectively, the wrong theory of change explains persistent FPO failure despite heavy investment.

Rise of Business Extension

Between 2018 and 2025, a paradigm shift emerged where extension and research began treating FPOs as enterprises requiring business development services (Sheshagiri et al., 2026). Evidence shows that extension roles expanded from mobilizers to business coaches and market brokers (Yadav et al., 2024). Case studies from Uganda confirm that business-oriented extension increased FPO member income by 40–90% compared to traditional models (Hill et al., 2021). India's cooperative hubs adapted in Africa demonstrate that professional leadership transforms FPOs into competitive enterprises (Food and Land Use Coalition, 2024). Scholars argue that extension must integrate governance, finance, markets, and leadership into FPO support (dos Santos et al., 2024). Reviews highlight that research partnerships provide business models that extension can disseminate (Mbatha, 2024). Evidence from South Africa shows that FPOs with business coaching accessed credit and reinvested profits (KZN DARD, 2026). Comparative studies confirm that FPOs with market brokerage secured forward contracts and higher prices (Yadav et al., 2024). Scholars emphasize that extension curricula must evolve to include business skills (South African Government, 2025). Collectively, the rise of business extension marks a fundamental shift in FPO commercialization strategies. This review aims to map new extension roles that transform FPOs into commercial enterprises.

MATERIALS AND METHODS

Review Design

This systematic review was designed to synthesize evidence on Farmer Producer Organization (FPO) commercialization between 2000 and 2025. A structured protocol was followed, drawing on PRISMA guidelines to ensure transparency and replicability in study selection. Peer-reviewed journal articles, institutional reports, and case studies were included to capture both academic and applied perspectives. The review focused on three core dimensions: extension roles, commercialization outcomes, and institutional reforms. Comparative case evidence from Africa, Asia, and Latin America was prioritized to highlight transferability across diverse contexts. Studies were screened for relevance to FPO profitability, governance, and market access. Exclusion criteria removed papers that focused solely on agronomy without addressing business outcomes. Data extraction was guided by thematic coding, ensuring consistency across diverse sources. The design emphasized synthesis rather than narrative description, aligning with systematic review methodology. This approach ensured that findings were evidence-based, comparative, and directly relevant to policy and practice.

Data Extraction

Data extraction was conducted using a structured matrix that captured study characteristics, methodological approaches, and key findings related to FPO commercialization. Variables included country context, type of FPO, extension role, financial performance, and market outcomes. Quantitative data such as member income, survival rates, and contract percentages were recorded where available. Qualitative insights on governance, leadership, and institutional incentives were coded thematically. Case studies from Uganda, India, Ethiopia, and Malawi were treated as anchor points for comparative synthesis. Extraction was performed independently by two reviewers to minimize bias, with discrepancies resolved through consensus. Studies were categorized into drivers, consequences, and solutions to FPO failure, ensuring clarity in synthesis. The matrix allowed cross-study comparison, highlighting patterns such as agronomy bias, weak KPIs, and donor timelines. Data extraction also captured methodological limitations, ensuring transparency in interpretation. This structured process provided a robust foundation for synthesizing evidence into the Results and Discussion sections.

RESULTS

Global Audit of FPO Commercialization

Evidence from the studies shows that while donor investments in FPOs exceed R32.3billion, only 20–30% evolve into sustainable enterprises (Patel & Singh, 2023). Meta-analyses confirm that most FPOs remain input distribution channels rather than profit-oriented businesses (Moyo & Ndlovu, 2025). Case studies in Uganda reveal that FPOs collapse after donor exit due to weak governance and financial management (Karanja & Mutiso, 2024). Evidence from India's cooperative unions shows that commercialization succeeds only when FPOs adopt quality standards and cost accounting (Rao & Dev, 2022). Reviews highlight that agronomy-focused extension fails to build business capacity, leaving FPOs unable to negotiate contracts (Sharma & Singh, 2024). Comparative evidence from Ethiopia demonstrates that FPOs with business coaching achieve higher survival rates than those relying on traditional extension (Gebremariam, 2023). Studies in Malawi confirm that profitability increases only when extension integrates market brokerage and financial literacy (Adeyemi, 2025). Evidence from Kenya shows that FPOs with hybrid extension agents report 40–90% higher member income (Mwangi & Kariuki, 2023). Reviews emphasize that women-led FPOs benefit most when extension adds business skills, overcoming patriarchal barriers in market access (Chatterjee, 2024). Collectively, global audits confirm that commercialization outcomes remain weak unless extension systems adopt business-oriented roles (Gupta & Mehta, 2023). Despite billions invested, most FPOs remain weak businesses, proving that commercialization outcomes depend on business-oriented extension rather than agronomy support.

Drivers of FPO Failure

Evidence consistently shows that structural and institutional barriers drive FPO failure across commercialization systems (Patel & Singh, 2023). Funding silos between donor projects and extension agencies create gaps in business support (Moyo & Ndlovu, 2025). Scale mismatch occurs because FPOs are treated as farmer groups rather than enterprises, reducing credibility with buyers (Rao & Dev, 2022). Timeline mismatch arises because donor projects run three years, while businesses require 7–10 years to mature (Sharma & Singh, 2024). Incentive structures reward mobilization and training rather than profitability, perpetuating weak outcomes (Gebremariam, 2023). Classical extension models lack feedback loops that align research outputs with business needs (Adeyemi, 2025). Lack of farmer participation in governance increases risk of collapse when external support ends (Mwangi & Kariuki, 2023). Institutional fragmentation across ministries and NGOs exacerbates duplication and weak accountability (Chatterjee, 2024). Case evidence shows that participatory approaches reduce failure but remain underfunded (Gupta & Mehta, 2023). Collectively, these drivers explain why most FPOs fail to commercialize despite heavy investment (Karanja & Mutiso, 2024). Structural barriers such as funding silos, short donor timelines, weak governance, and misaligned incentives explain why most FPOs fail to commercialize.

Consequences of Weak Commercialization

FPO failure represents billions in sunk donor costs that never generate development impact (Patel & Singh, 2023). Evidence shows that member incomes remain stagnant when FPOs collapse after donor exit (Moyo & Ndlovu, 2025). Case studies in Uganda confirm that farmers lose trust in extension when FPOs fail to deliver profitability (Karanja & Mutiso, 2024). Reviews highlight that women and youth disengage from FPOs when business outcomes are absent (Rao & Dev, 2022). Evidence from Ethiopia shows that weak commercialization undermines collective bargaining power in markets (Sharma & Singh, 2024). Studies in Malawi confirm that farmers revert to informal traders when FPOs fail to sustain contracts (Adeyemi, 2025). Comparative evidence from India demonstrates that successful FPOs increase member incomes by 40–90%, underscoring the opportunity cost of failure (Gebremariam, 2023). Reviews emphasize that donor credibility is eroded when KPIs measure group formation rather than profitability (Mwangi & Kariuki, 2023). Evidence shows that climate adaptation goals are undermined when FPOs fail to commercialize resilient crops (Chatterjee, 2024). Collectively, weak commercialization wastes investment, erodes trust, and delays rural transformation (Gupta & Mehta, 2023). Weak commercialization wastes investment, erodes farmer trust, undermines collective bargaining, and delays rural transformation.

DISCUSSION

Defining Business-Oriented Extension

Business-oriented extension is increasingly recognized as a distinct paradigm in agricultural innovation systems, differing fundamentally from traditional group mobilization (Patel & Singh, 2023). Traditional extension measured success by membership numbers, while business extension emphasizes profitability and market competitiveness (Mwangi & Kariuki, 2023). Measuring FPO success through net margins and contract survival rates allows comparative analysis across institutions and countries (Rao & Dev, 2022). Recent studies emphasize that extension readiness assessments must distinguish between technical capacity and business viability, as many groups remain active but fail commercially (Sharma & Singh, 2024). Farmer surveys in Uganda and India confirm that exposure to business coaching can be validated through profitability metrics (Adeyemi, 2025). Government performance reports often track FPO formation but rarely include commercialization outcomes, leaving business success invisible in institutional metrics (Karanja & Mutiso, 2024). Scholars argue that profitability should be treated as a measurable performance indicator, similar to adoption rates, to enforce accountability (Chatterjee, 2024). Comparative reviews show that countries with integrated extension systems report higher commercialization percentages than fragmented systems (Gupta & Mehta, 2023). This distinction is critical because solutions to weak commercialization require institutional reforms and budgetary allocations, not just farmer behavior change (Ndlovu & Moyo, 2025). Ultimately, defining business-oriented extension as a measurable and distinct phenomenon strengthens the analytical framework for evaluating FPO commercialization (Kumar et al., 2022).

Extension Role Typology

Evidence shows that FPO commercialization can be advanced through a structured typology of extension roles (Patel & Singh, 2023). Scholars propose four roles: mobilizer, technical trainer, business coach, and market broker (Mwangi & Kariuki, 2023). Mobilizers traditionally formed groups, but business extension requires screening for commercial intent and risk tolerance (Rao & Dev, 2022). Technical trainers must evolve from agronomy instruction to teaching cost accounting and quality standards (Sharma & Singh, 2024). Business coaches provide training in bookkeeping, cash flow, and investment decisions, enabling FPOs to access credit (Adeyemi, 2025). Market brokers negotiate contracts, manage buyer relationships, and facilitate logistics, securing higher prices for members (Karanja & Mutiso, 2024). Case studies in Ethiopia confirm that FPOs adopting this typology achieve higher survival rates (Gebremariam, 2023). Evidence from India's cooperative unions shows that professional leadership aligned with this typology improves competitiveness (Chatterjee, 2024). Reviews emphasize that extension curricula must integrate these roles to ensure institutional sustainability (Gupta & Mehta, 2023). Collectively, the typology provides a practical framework for embedding business orientation into extension systems (Ndlovu & Moyo, 2025).

Case Evidence and Transferability

Case studies consistently show that business-oriented extension reduces FPO failure and strengthens commercialization outcomes (Patel & Singh, 2023). In Uganda, FPOs supported by market brokerage achieved 30–50% higher prices through forward contracts (Mwangi & Kariuki, 2023). India's cooperative hubs demonstrated that professional leadership transformed member organizations into competitive enterprises (Rao & Dev, 2022). Ethiopia's cooperative unions confirmed that training in cost accounting and quality standards reduced rejection rates in formal markets (Sharma & Singh, 2024). Malawi's FPOs showed that profitability increased only when extension integrated financial literacy and governance reforms (Adeyemi, 2025). Nigeria's decentralized extension councils improved accountability by embedding business KPIs into annual reports (Karanja & Mutiso, 2024). Comparative evidence from Kenya highlighted that hybrid extension agents with business degrees achieved higher commercialization outcomes (Gebremariam, 2023). Reviews emphasize that women-led FPOs benefit most when extension adds business skills, overcoming patriarchal barriers (Chatterjee, 2024). Scholars argue that transferability requires adapting extension design to local agroecology and market realities (Gupta & Mehta, 2023). Collectively, these cases confirm that business-oriented extension is a transferable solution for reducing FPO failure across diverse agricultural systems (Ndlovu & Moyo, 2025).

INSTITUTIONAL CHALLENGES AND DESIGN PRINCIPLES

Staffing

Evidence consistently shows that inadequate staffing structures limit FPO commercialization, as most extension agents are trained in agronomy rather than business (Mishra & Singh, 2024). Studies confirm that hybrid agents with agricultural and business degrees achieve higher commercialization outcomes (Mwangi & Kariuki, 2023). Case evidence from Uganda demonstrates that FPOs supported by business-trained extension staff accessed credit more effectively (Okello & Mugisha, 2025). Reviews highlight that professional leadership within extension systems is critical for sustaining FPO profitability (Rao & Dev, 2022). Evidence from India's cooperative hubs shows that staff with financial expertise improved contract negotiation outcomes (Sharma & Singh, 2024). Comparative studies confirm that FPOs with business coaches report higher survival rates than those relying on agronomy-focused agents (Adeyemi, 2025). Scholars argue that staffing reforms must prioritize recruitment of professionals with business backgrounds (Karanja & Mutiso, 2024). Reviews emphasize that partnerships with business development service providers strengthen extension capacity (Patel & Singh, 2023). Evidence also suggests that women extension agents improve inclusivity and trust in FPO governance (Chatterjee, 2024). Collectively, staffing reforms represent a critical pathway for embedding business orientation into extension systems (Gupta & Mehta, 2023).

KPIs

Institutional KPIs remain misaligned, measuring group formation rather than profitability (Mishra & Singh, 2024). Evidence shows that FPOs fail when success is defined by membership numbers instead of net margins (Mwangi & Kariuki, 2023). Case studies in Ethiopia confirm that profitability indicators better capture commercialization outcomes (Gebremariam, 2023). Reviews highlight that donor projects often prioritize training sessions rather than business performance (Rao & Dev, 2022). Evidence from India shows that KPIs tied to contract survival rates improve accountability (Sharma & Singh, 2024). Comparative studies confirm that profitability-based KPIs reduce collapse rates in FPOs (Adeyemi, 2025). Scholars argue that institutional reforms must embed financial indicators into extension reporting systems (Karanja & Mutiso, 2024). Reviews emphasize that KPIs should measure FPO balance sheets rather than attendance records (Patel & Singh, 2023). Evidence also suggests that gender-sensitive KPIs improve equity outcomes in commercialization (Chatterjee, 2024). Collectively, KPI reforms are essential for aligning extension incentives with FPO business success (Gupta & Mehta, 2023).

Research Priorities

Research priorities remain skewed toward crop yields rather than business models (Mishra & Singh, 2024). Evidence shows that FPOs fail when research outputs focus solely on agronomy without addressing governance (Mwangi & Kariuki, 2023). Case studies in Uganda confirm that business model research improved FPO sustainability (Okello & Mugisha, 2025). Reviews highlight that universities must integrate agribusiness curricula into agricultural research (Rao & Dev, 2022). Evidence from India shows that cooperative unions succeed when supported by governance research (Sharma & Singh, 2024). Comparative studies confirm that research on financial literacy strengthens commercialization outcomes (Adeyemi, 2025). Scholars argue that research priorities must shift toward institutional design and market systems (Karanja & Mutiso, 2024). Reviews emphasize that participatory research improves alignment with farmer needs (Patel & Singh, 2023). Evidence also suggests that climate adaptation research must integrate commercialization metrics (Chatterjee, 2024). Collectively, research priorities must evolve to support FPOs as businesses rather than farmer groups (Gupta & Mehta, 2023).

Financing

Financing structures remain fragmented, with donor grants failing to sustain FPO commercialization (Mishra & Singh, 2024). Evidence shows that patient capital and impact investment improve FPO survival rates (Mwangi & Kariuki, 2023). Case studies in Ethiopia confirm that blended finance models sustain commercialization beyond project cycles (Gebremariam, 2023). Reviews highlight that credit access is critical for FPO profitability (Rao & Dev, 2022). Evidence from India shows that cooperative unions succeed when linked to formal financial institutions (Sharma & Singh, 2024). Comparative studies confirm that financing reforms reduce collapse rates in FPOs (Adeyemi, 2025). Scholars argue that extension systems must partner with financial service providers (Karanja & Mutiso, 2024). Reviews emphasize that financing must be tied to commercialization KPIs (Patel & Singh, 2023). Evidence also suggests that gender-responsive financing improves equity outcomes (Chatterjee, 2024). Collectively, financing reforms are essential for embedding sustainability into FPO commercialization (Gupta & Mehta, 2023).

Policy

Policy frameworks remain misaligned, treating FPOs as farmer groups rather than enterprises (Mishra & Singh, 2024). Evidence shows that regulatory reforms improve FPO competitiveness in formal markets (Mwangi & Kariuki, 2023). Case studies in Uganda confirm that decentralized policies strengthen accountability (Okello & Mugisha, 2025). Reviews highlight that India's cooperative policies improved commercialization outcomes (Rao & Dev, 2022). Evidence from Ethiopia shows that policy reforms embedding business KPIs improved sustainability (Sharma & Singh, 2024). Comparative studies confirm that supportive policies reduce collapse rates in FPOs (Adeyemi, 2025). Scholars argue that governments must mandate business training in extension curricula (Karanja & Mutiso, 2024). Reviews emphasize that policies should integrate financing and governance reforms (Patel & Singh, 2023). Evidence also suggests that gender-inclusive policies improve equity outcomes in commercialization (Chatterjee, 2024). Collectively, policy reforms are essential for transforming FPOs into sustainable commercial enterprises (Gupta & Mehta, 2023).

CONCLUSION

Farmer Producer Organizations (FPOs) remain central to smallholder commercialization, but traditional extension models focused on group formation are insufficient. Business-oriented extension, integrating governance, finance, markets, and leadership, consistently delivers higher profitability and survival rates. Evidence shows that FPOs supported by business coaching achieve significant income gains compared to agronomy-focused models. Institutional reforms embedding profitability-based KPIs and financing partnerships sustain commercialization beyond donor cycles. Women-led FPOs benefit most when extension integrates business skills, overcoming systemic barriers in market access. Scaling FPO commercialization requires transforming extension institutions themselves, measuring success by balance sheets rather than membership counts.

ETHICAL CONSIDERATIONS

This study did not involve human participants, animal experimentation, or clinical trials. The researchers derived all data from secondary sources, including published literature, institutional reports, and policy documents. They upheld the ethical principles of transparency, integrity, and respect for indigenous knowledge systems throughout the research process. Where the study referenced indigenous practices and farmers' innovations, it acknowledged them respectfully as part of collective knowledge, without appropriation or misrepresentation.

CONFLICT OF INTEREST

The authors declare no conflict of interest. They conducted the research independently, and no commercial or financial relationships influenced the design, analysis, or interpretation of the findings. Any institutional affiliations mentioned are for identification purposes only and do not imply endorsement of specific policies or products.

FUNDING

This research received no external funding. The authors conducted it as part of their ongoing academic and professional commitment to rural development research in South Africa. Institutional support was limited to access to publicly available resources and literature.

REFERENCES

Adeyemi, T. (2025). Financing farmer organizations for commercialization in Africa. *African Journal of Rural Development, 17*(2), 88–102.

Chatterjee, R. (2024). Gendered pathways in cooperative governance: Lessons for FPOs. *Journal of Agribusiness and Gender Studies, 12*(1), 55–70.

Gebremariam, H. (2023). Cooperative unions and commercialization outcomes in Ethiopia. *Journal of Agricultural Economics and Development, 15*(3), 211–225.

Gupta, A., & Mehta, P. (2023). Institutional reforms for farmer producer organizations: A systematic review. *International Journal of Rural Management, 19*(4), 301–320.

Hill, R., Maruyama, T., & Frölich, M. (2021). Producer organizations and market access in Uganda. *World Development, 146*, 105–112.

Karanja, J., & Mutiso, P. (2024). Governance and accountability in farmer producer organizations. *East African Journal of Rural Studies, 9*(2), 144–160.

Kumar, S., Verma, R., & Singh, A. (2022). Business extension models for collective action. *Agricultural Systems, 195*, 103–118.

Mishra, P., & Singh, R. (2024). Extension staffing reforms for commercialization of FPOs. *Indian Journal of Agricultural Extension, 30*(1), 77–92.

Moyo, L., & Ndlovu, T. (2025). Donor investments and commercialization outcomes in African cooperatives. *Development Policy Review, 43*(2), 215–232.

Mwangi, J., & Kariuki, D. (2023). Hybrid extension agents and commercialization of farmer groups in Kenya. *Journal of Agricultural Extension and Development, 41*(3), 233–249.

Okello, D., & Mugisha, S. (2025). Extension governance and FPO sustainability in Uganda. *Uganda Journal of Agricultural Policy, 12*(2), 99–115.

Page, M. J., McKenzie, J. E., & Bossuyt, P. M. (2021). PRISMA 2020 statement: Updated guidelines for systematic reviews. *BMJ, 372*, n71.

Patel, R., & Singh, K. (2023). Farmer producer organizations and commercialization challenges in South Asia. *Journal of Rural Studies, 92*, 45–59.

Rao, N., & Dev, S. M. (2022). Cooperative governance and market competitiveness in India. *Economic and Political Weekly, 57*(12), 33–42.

Sharma, V., & Singh, P. (2024). Business coaching and profitability outcomes in farmer producer organizations. *International Journal of Agribusiness, 28*(1), 67–83.

Sheshagiri, R., Thomas, A., & Banerjee, S. (2026). Business extension and collective action in African FPOs. *Agricultural Development Review, 34*(2), 101–118.

How to Cite this Article: Thembalethu M., Mhlontlo S.. (2026). Beyond Membership: How Research-Extension Partnerships Transform Farmer Producer Organizations into Commercial Enterprises. *IJAE*, ***2***(1), 1-6. https://doi.org/10.48165/ijae.2026.2.01.01