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BUSINESS INCUBATION SUPPORT, INNOVATION, AND ENTREPRENEURIAL CREATIVITY IN SALTED-FISH PROCESSING MSMEs: AN EXPLORATORY PILOT STUDY IN RANTAU BAYUR, INDONESIA

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Abstract

Salted-fish processing micro, small, and medium enterprises (MSMEs) contribute to local livelihoods but often operate under resource constraints involving finance, technology, market access, and managerial capabilities. Business incubation may help address these constraints; however, the mechanism through which incubation-related support is translated into entrepreneurial creativity remains insufficiently understood in traditional, resource-constrained sectors. This exploratory pilot study examines the associations among business incubation support, innovation, and entrepreneurial creativity among salted-fish processing MSMEs in Rantau Bayur District, Banyuasin Regency, South Sumatra, Indonesia. The available pilot dataset comprises 11 owner-managers. The three constructs were measured using 54 Likert-type indicators. Given the extremely small sample, the analysis is treated as preliminary diagnostics rather than confirmatory structural modelling. Descriptive statistics, internal-consistency estimates, exploratory measurement diagnostics, ordinary least-squares path regressions, and a 10,000-resample bootstrap procedure are reported as supplied in the source analysis. Business incubation support was positively associated with innovation ($\beta = 0.869$; $R^2 = 0.756$), and innovation was positively associated with entrepreneurial creativity ($\beta = 1.249$). The direct association between incubation support and creativity was negative and statistically non-significant ($\beta = -0.530$), while the estimated indirect association through innovation was positive ($\beta = 1.086$; 95% bootstrap CI [0.308, 1.941]). These estimates are highly uncertain because of the sample size, unusually large standardized coefficients, and evidence of inadequate discriminant validity between incubation support and innovation (HTMT = 0.905). The findings therefore identify a tentative pattern for subsequent testing, not a confirmed mediation effect. The study highlights the need for implementation-oriented support that connects mentoring and training with feasible product, process, packaging, technology, and market innovations.

Keywords: business incubation; innovation; entrepreneurial creativity; MSMEs; salted-fish processing; pilot study

Introduction

Micro, small, and medium-sized enterprises (MSMEs) are important contributors to employment, household income, and the circulation of locally embedded economic activity. Their contribution is particularly visible in food-processing activities that transform locally available

agricultural and fishery resources into products with longer shelf lives and marketable value. Yet small firms commonly face constraints that limit their ability to upgrade production, improve product quality, adopt technology, and reach more demanding markets. These constraints are not simply financial: they also involve managerial knowledge, access to networks, information, and the capacity to identify and implement opportunities (Acs & Audretsch, 1988; OECD/Eurostat, 2018; Rosenbusch et al., 2011). National statistics also document persistent constraints involving access to capital, human-resource quality, management, and business legality among Indonesian micro and small industries (Badan Pusat Statistik, 2025). Research on small-firm entrepreneurship also underscores the importance of strategic posture, entrepreneurial orientation, and firm-specific resource configurations in shaping how smaller firms respond to competitive conditions (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Wiklund & Shepherd, 2005). The role of firm size in innovation has long been examined in the small-firm innovation literature (Acs & Audretsch, 1988).

Salted-fish processing in Rantau Bayur District, Banyuasin Regency, is embedded in a local river-fishery economy. The source study describes household-based enterprises that rely on local raw materials and accumulated production experience, while some continue to use relatively simple technologies and traditional marketing channels. This operating context creates a practical development challenge. Improving competitiveness may require more than increasing production: enterprises may need to improve drying and handling practices, standardise quality, redesign packaging, develop product variants, and expand market access. These changes require both resources and the capability to convert knowledge into action.

Business incubators are commonly understood as organisations or support arrangements that combine mentoring, training, infrastructure, networks, technological assistance, and access to finance or markets. The literature shows that incubation models differ in their service portfolios, selection practices, and institutional settings (Aernoudt, 2004; Bergek & Norrman, 2008; Bruneel et al., 2012; Hackett & Dilts, 2004; Mian, 1996). Incubation is therefore better conceptualised as a multidimensional support process than as a single intervention. Its outcomes depend on whether services are relevant to the needs of participating firms and whether recipients can mobilise the resources required to apply what they learn (Sohail et al., 2023; Theodorakopoulos et al., 2014).

Nevertheless, access to incubation-related support does not necessarily produce entrepreneurial creativity directly. Training and advice may expand knowledge, but the economic value of such support depends on whether entrepreneurs translate that knowledge into implemented changes. The Oslo Manual defines business innovation in terms of new or improved products or business processes that are introduced to the market or brought into use by the firm (OECD/Eurostat, 2018). Innovation can thus represent an intermediate process through which support is converted into changed practices. The distinction between creativity and innovation is important: creativity concerns the generation of novel and useful ideas, whereas innovation also involves the implementation of ideas (Amabile, 1997; Anderson et al., 2014; Woodman et al., 1993).

Prior research has linked incubation to venture development and resource access (Bergek & Norrman, 2008; Bruneel et al., 2012; Hackett & Dilts, 2004), while research on innovation capability has examined its relationship with organisational outcomes and adaptation (Cohen &

Levinthal, 1990; Somwethee et al., 2023; Zahra et al., 2006). However, the pathway connecting incubation-related support, implemented innovation, and entrepreneurial creativity in traditional micro-enterprises remains underexplored. In particular, there is a need to distinguish support inputs—such as mentoring, training, finance, and market facilitation—from innovation outputs that are actually implemented by the enterprise.

This article addresses that issue through an exploratory pilot study of salted-fish processing MSMEs in Rantau Bayur. It examines four proposed relationships: (1) business incubation support and innovation; (2) business incubation support and entrepreneurial creativity; (3) innovation and entrepreneurial creativity; and (4) the indirect association between incubation support and creativity through innovation. The article's contribution is deliberately bounded. With only 11 available respondents, it does not claim to provide confirmatory evidence or population-level estimates. Instead, it reports preliminary measurement and association diagnostics that can inform instrument refinement and the design of a larger study.

Theoretical Framework

Business incubation support

Business incubation has evolved from a facility-oriented model towards broader approaches that provide firms with combinations of physical resources, business advice, networks, legitimacy, knowledge, and access to external stakeholders. Early and subsequent reviews identify multiple dimensions of incubation, including incubator configuration, service provision, tenant development, and performance (Hackett & Dilts, 2004; Mian, 1996). Later work highlights the importance of matching service portfolios to venture needs and recognising differences between incubator generations (Bergek & Norrman, 2008; Bruneel et al., 2012). Earlier empirical and conceptual work has examined incubator structure, policy, service provision, venture creation, and the role of university-linked incubation (Allen & McCluskey, 1990; Grimaldi & Grandi, 2005; Mian, 1996; Phan et al., 2005). Research on incubator-based entrepreneurship also links incubation arrangements with value creation and venture development (Lin-Lian et al., 2022; Shane & Venkataraman, 2000).

For this study, business incubation support is operationalised as the perceived availability of six forms of assistance: business mentoring, entrepreneurship training, technology access, business networking, financing support, and marketing support. This operationalisation is broader than participation in a formally designated incubator. The source manuscript reports that no formal incubator institution operates in the immediate study context; therefore, the construct should be interpreted as an incubation-related support ecosystem delivered through relevant organisations or programmes, rather than as exposure to a single formal incubator. This distinction is important for construct validity and should be retained in any future instrument.

Business incubation support and innovation

Incubation-related services may support innovation by improving entrepreneurs' access to knowledge, expertise, technology, partners, and markets. From an absorptive-capacity perspective, external knowledge becomes useful when a firm can recognise, assimilate, and apply it (Cohen & Levinthal, 1990). Dynamic-capabilities research similarly emphasises the ability to reconfigure resources and routines in response to changing conditions (Teece, 2007; Zahra et al., 2006). In

small firms, incubation services may provide external inputs that would otherwise be difficult to obtain.

Innovation is not restricted to high-technology invention. It may involve new or improved products and business processes, including production, delivery, marketing, and supporting functions (OECD/Eurostat, 2018). In salted-fish processing, examples may include product variants, improved drying or handling procedures, packaging changes, digital promotion, or new distribution arrangements. Such examples are conceptual possibilities, not claims that every respondent had implemented them. The literature on incubation and innovation supports the expectation that access to relevant services can facilitate innovation activity (Bergek & Norrman, 2008; Bruneel et al., 2012; Sohail et al., 2023). More broadly, innovation research has developed multidimensional definitions and examined organisational determinants, employee innovation behaviour, and the effects of different innovation types on firm outcomes (Baregheh et al., 2009; Damanpour, 1991; De Jong & Den Hartog, 2010; Gunday et al., 2011). Innovation can also be understood as a process of economic change and diffusion rather than invention alone (Rogers, 2003; Schumpeter, 1934).

H1: Business incubation support is positively associated with innovation.

Business incubation support and entrepreneurial creativity

Entrepreneurial creativity involves generating ideas that are both novel and appropriate to the problems and opportunities of a venture. Amabile (1997) emphasises the role of motivation and skill development in entrepreneurial creativity, while organisational research identifies individual, contextual, and organisational conditions that shape creative activity (Anderson et al., 2014; Shalley et al., 2004; Woodman et al., 1993). Mentoring, training, and interaction with external stakeholders may broaden entrepreneurs' knowledge and expose them to alternative ways of addressing production and market problems. Entrepreneurial opportunity recognition and strategic action are also central to entrepreneurship as a field of inquiry (Shane & Venkataraman, 2000), while employee-level research has shown how voice and dissatisfaction may shape creative responses to workplace conditions (Zhou & George, 2001).

Incubation may therefore be associated with creativity by providing learning opportunities and reducing informational isolation. However, support may not directly translate into creativity where entrepreneurs lack the resources or discretion to experiment. The literature on incubator services suggests that the value of support depends on how it is configured and used by participating firms (Aernoudt, 2004; Theodorakopoulos et al., 2014).

H2: Business incubation support is positively associated with entrepreneurial creativity.

Innovation and entrepreneurial creativity

Creativity and innovation are related but analytically distinct. Creativity refers primarily to idea generation, whereas innovation includes the implementation of ideas in products, processes, or organisational practices (Amabile, 1997; Anderson et al., 2014). The relationship can also be iterative: experimentation and feedback from implemented changes may generate new knowledge and stimulate further idea generation. Innovation activity may therefore coexist with, and potentially reinforce, entrepreneurial creativity.

Innovation capability has been linked to organisational adaptation and performance, although its effects depend on the firm and its context (Gunday et al., 2011; Rosenbusch et al.,

2011; Somwethee et al., 2023). For resource-constrained MSMEs, practical experimentation may help entrepreneurs identify feasible solutions to product, process, and market challenges.

H3: Innovation is positively associated with entrepreneurial creativity.

The mediating role of innovation

The proposed mediation model treats incubation support as an enabling input, innovation as the implementation mechanism, and entrepreneurial creativity as a capability-related outcome. Support services may provide knowledge and resources, but entrepreneurs must translate these inputs into changes in products or business processes. Through this process, they may gain practical experience, feedback, and confidence that can support subsequent idea generation and problem solving. This logic is consistent with the distinction between creativity and implementation in innovation research (Anderson et al., 2014; OECD/Eurostat, 2018) and with research on knowledge absorption and dynamic capabilities (Cohen & Levinthal, 1990; Teece, 2007).

H4: Innovation statistically mediates the association between business incubation support and entrepreneurial creativity. Given the pilot design, this hypothesis is examined only as an exploratory indirect-association pattern; it is not treated as a causal mediation claim.

Conceptual model

Predictor	Proposed mediator	Outcome
Business incubation support (X)	Innovation (Z)	Entrepreneurial creativity (Y)

Research Method

Research design and setting

The study used a quantitative, cross-sectional, explanatory design and is reported as an exploratory pilot study. The research setting was Rantau Bayur District, Banyuasin Regency, South Sumatra, Indonesia. The unit of analysis was the owner or manager of a salted-fish processing MSME. The source manuscript reports 11 available respondents. The recruitment procedure, fieldwork dates, response rate, and inclusion criteria were not fully specified in the supplied draft and must be added by the authors before submission. These details should not be inferred retrospectively.

Measures

The questionnaire used a five-point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree). Three constructs were measured using 54 indicators in total, with 18 indicators per construct. Business incubation support comprised six dimensions: business mentoring, entrepreneurship training, technology access, business networking, financing support, and marketing support. Innovation comprised product, process, marketing, packaging, technological, and business-model innovation. Entrepreneurial creativity comprised idea generation, opportunity recognition, product creativity, marketing creativity, adaptation, and willingness to experiment. Each dimension was represented by three items.

The complete item wording, source/adaptation of each scale, translation procedure, and expert-review process were not included in the supplied manuscript. These are essential for reproducibility and construct assessment. Authors should append the exact questionnaire and

document whether items were newly developed, adapted from published measures, translated, or modified for the salted-fish MSME context. In particular, the boundary between incubation support (inputs/services) and innovation (implemented changes) should be made explicit to reduce conceptual overlap.

Participants and data

The available pilot dataset comprised 11 respondents. The source manuscript reports that 9 respondents (81.8%) were male and 2 (18.2%) were female. Ages ranged from 19 to 61 years, with a reported mean of 33.27 years. Five respondents (45.5%) were aged 25 years or younger. Five respondents (45.5%) had completed senior secondary education (SMA/SMK/MAN), and eight (72.7%) reported employing one or two workers. Nine respondents (81.8%) had operated their businesses for more than one year. Six respondents identified financing as a constraint, including one who also mentioned marketing.

The sample size was determined by the number of eligible and available respondents in the preliminary fieldwork as reported in the source manuscript. A sample of 11 is not adequate for stable estimation of a measurement model containing 54 indicators or for confirmatory mediation analysis. Pilot-study guidance emphasises feasibility, instrument refinement, and estimation of uncertainty rather than definitive hypothesis testing (Kunselman, 2024; Leon et al., 2011). Accordingly, all inferential results are treated as provisional.

Analytical procedure

Descriptive statistics were used to summarise respondent characteristics and construct scores. The source analysis also reported Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), the Fornell–Larcker criterion, and the heterotrait–monotrait ratio (HTMT) as preliminary measurement diagnostics. Conventional thresholds were treated as heuristics rather than definitive evidence because the sample was extremely small. The HTMT approach is commonly used to assess discriminant validity in variance-based structural models (Henseler et al., 2015), while the Fornell–Larcker criterion is an earlier approach to this assessment (Fornell & Larcker, 1981). The evaluation of measurement models requires attention to reliability, validity, and the correspondence between theoretical constructs and observed indicators (Bagozzi & Yi, 1988).

Because the available sample was too small for stable confirmatory structural equation modelling, the source analysis used mean composite scores, standardised the construct scores, and estimated ordinary least-squares path regressions. A nonparametric bootstrap with 10,000 resamples was used to obtain preliminary confidence intervals. The reported analysis should not be interpreted as a substitute for a properly powered PLS-SEM or covariance-based SEM study. Sample-size planning for PLS-SEM should be based on model complexity and statistical power rather than a simplistic rule of thumb (Hair et al., 2022; Kock & Hadaya, 2018).

The source manuscript reports path coefficients and R^2 values but does not provide the raw data, analysis syntax, or complete bootstrap settings. Therefore, the present revision preserves the supplied numerical results without independently recalculating them. The exact resampling unit, treatment of missing data, standardisation method, and software/version should be disclosed in the final submission.

Methodological limitations of the pilot analysis

The very small sample relative to the number of indicators creates substantial risks of unstable loadings, inflated or erratic reliability estimates, imprecise path coefficients, and unreliable bootstrap intervals. A cross-sectional, single-source questionnaire also limits temporal interpretation and may be vulnerable to common-method variance. The analysis is therefore exploratory and should be used to identify instrument problems and hypotheses for a larger study, not to establish causal effects.

Results

Respondent profile

Characteristic	Category	n	%
Gender	Male	9	81.8
Gender	Female	2	18.2
Age	≤25 years	5	45.5
Age	26–35 years	1	9.1
Age	36–45 years	3	27.3
Age	>45 years	2	18.2
Education	Senior secondary (SMA/SMK/MAN)	5	45.5
Education	Primary school	3	27.3
Education	Junior secondary	1	9.1
Education	Bachelor's degree	1	9.1
Education	Master's degree	1	9.1
Employees	1–2	8	72.7
Employees	3–5	1	9.1
Employees	>5	2	18.2

The pilot group consisted predominantly of male owner-managers (81.8%). The largest age category was 25 years or younger (45.5%), although the reported age range extended from 19 to 61 years. Senior secondary education was the most common educational category (45.5%). Most businesses employed one or two workers (72.7%). The source manuscript further reports that nine respondents had operated their businesses for more than one year. Financing was the most frequently reported constraint, identified by six respondents.

Descriptive statistics and preliminary measurement diagnostics

Construct	Mean	SD	Cronbach's α	CR	AVE	Minimum loading	Maximum loading
Business incubation support	3.944	0.873	0.954	0.961	0.597	0.081	0.936
Innovation	3.843	0.943	0.979	0.983	0.769	0.335	0.982
Entrepreneurial creativity	3.732	0.508	0.939	0.951	0.530	0.255	0.892

The reported construct means ranged from 3.732 to 3.944. Cronbach's alpha estimates ranged from 0.939 to 0.979, and composite reliability estimates ranged from 0.951 to 0.983. The reported AVE values ranged from 0.530 to 0.769. However, the minimum indicator loadings were low: 0.081 for business incubation support, 0.335 for innovation, and 0.255 for entrepreneurial creativity. The source analysis identifies particularly weak loadings for perceived ease of access to finance (X5.3 = 0.081), ability to cope with competition (Y5.2 = 0.255), ability to develop new solutions (Y1.2 = 0.311), and social-media use (Z3.1 = 0.335).

These results should not be described as evidence that the measurement model has been validated. Very high internal-consistency estimates alongside extremely weak item loadings may indicate item redundancy, construct misspecification, or instability arising from the small sample. The item-level data and exact measurement specification should be re-examined before any scale is retained for a larger study.

Discriminant validity

Construct	**Business incubation support (X)**	**Innovation (Z)**	**Entrepreneurial creativity (Y)**
Business incubation support (X)	0.773	0.869	0.555
Innovation (Z)	0.869	0.877	0.788
Entrepreneurial creativity (Y)	0.555	0.788	0.728

Construct pair	**HTMT**
X–Z	0.905
X–Y	0.686
Z–Y	0.833

The HTMT estimate for business incubation support and innovation was 0.905, slightly above the commonly used 0.90 reference value. The correlation between X and Z (0.869) also exceeded the square root of AVE reported for X (0.773). These diagnostics indicate that the distinction between support services and implemented innovation is not sufficiently clear in the current pilot measurement. The other HTMT estimates were 0.686 for X–Y and 0.833 for Z–Y. Given the sample size, these statistics are only preliminary, but the X–Z overlap is a substantive measurement concern that should be addressed before the model is tested again.

Exploratory path estimates

Path/effect	**β**	**95% bootstrap CI**	**Bootstrap p**	**CI excludes zero?**
X → Z	0.869	[0.503, 1.170]	0.003	Yes
X → Y	−0.530	[−1.384, 0.787]	0.354	No
Z → Y	1.249	[0.405, 2.163]	0.011	Yes
X → Z → Y	1.086	[0.308, 1.941]	0.014	Yes
Total X → Y	0.555	[0.205, 1.546]	0.012	Yes

The source analysis reports a positive association between business incubation support and innovation ($\beta = 0.869$), with $R^2 = 0.756$ for the innovation equation. In the creativity equation, the direct path from incubation support was negative and statistically non-significant ($\beta = -0.530$; $p = 0.354$), whereas the path from innovation was positive ($\beta = 1.249$; $p = 0.011$). The two predictors jointly explained a reported 69.0% of the variance in entrepreneurial creativity ($R^2 = 0.690$). The variance inflation factor was 4.091.

The estimated indirect association through innovation was positive ($\beta = 1.086$; 95% bootstrap CI [0.308, 1.941]; $p = 0.014$), while the direct path was not statistically significant. Although this numerical pattern resembles indirect-only mediation, the coefficient for innovation exceeds 1, the direct coefficient changes sign, the confidence intervals are wide, and the X–Z discriminant-validity diagnostic is problematic. With only 11 cases, the apparent indirect effect should not be interpreted as reliable evidence of mediation. The total-effect estimate is also reported as supplied in the source analysis and requires verification against the original analysis output.

Discussion

Incubation-related support and innovation

The pilot estimates suggest a positive association between incubation-related support and innovation. This pattern is conceptually consistent with the view that incubators provide a bundle of resources rather than a single service. Mentoring, training, technology access, networks, finance, and marketing assistance can expose owner-managers to knowledge and external resources that may be difficult to access independently (Bergek & Norrman, 2008; Bruneel et al., 2012; Hackett & Dilts, 2004; Sohail et al., 2023). The pattern is also compatible with absorptive-capacity and dynamic-capabilities perspectives, which emphasise the acquisition, assimilation, and application of external knowledge (Cohen & Levinthal, 1990; Teece, 2007; Zahra et al., 2006).

In the Rantau Bayur context, this interpretation should be framed in terms of an incubation-related support ecosystem rather than a formal incubator unless the authors can document a formal incubator programme. This matters because the measured construct combines services that may be provided by different institutions or informal actors. Future work should identify who provides each service, how frequently it is accessed, and whether the respondent actually participates in a coordinated incubation programme. Incubator research demonstrates that service configurations and institutional arrangements vary substantially (Aernoudt, 2004; Mian, 1996; Theodorakopoulos et al., 2014).

Innovation as a possible link to entrepreneurial creativity

The positive pilot association between innovation and entrepreneurial creativity is consistent with the proposition that implementation can generate learning. When entrepreneurs test a product variation, adjust a production routine, or try a different marketing channel, the resulting feedback may help them recognise further opportunities and develop new solutions. This interpretation aligns with research distinguishing idea generation from idea implementation while recognising their reciprocal relationship (Amabile, 1997; Anderson et al., 2014; Woodman et al., 1993).

However, the direction of the relationship cannot be established in a cross-sectional pilot study. Creative entrepreneurs may be more likely to initiate innovation, and innovation experience

may in turn stimulate further creativity. A longitudinal design or repeated measurement would be required to examine this reciprocal process. The study should therefore describe the result as an association rather than a causal effect.

Interpreting the indirect-effect pattern cautiously

The estimated indirect path is positive, while the direct path from incubation support to creativity is negative and non-significant. This pattern could be consistent with a mechanism in which support becomes relevant to creativity when it is translated into implemented innovation. Nevertheless, the current data cannot establish this mechanism. The sample is extremely small, the estimated standardised coefficient for innovation exceeds one, and the measurement diagnostics indicate overlap between the predictor and mediator. These features make the indirect-effect estimate particularly sensitive to individual observations and model specification.

The appropriate contribution is therefore a testable proposition for subsequent research: incubation support may be more closely associated with entrepreneurial creativity when it leads to observable innovation practices. This proposition should be tested using a larger sample, clearly separated measures of support and innovation, and preferably temporally separated observations. Statistical significance in this pilot should not be used as a basis for claiming that mediation has been established. Pilot-study methodology cautions against treating small feasibility samples as definitive hypothesis tests (Kunselman, 2024; Leon et al., 2011).

Implications

The practical implication is that MSME support should be evaluated not only by the number of training sessions delivered but also by whether participants can implement feasible changes. For salted-fish processors, potential implementation targets include improved drying and handling routines, packaging and labelling improvements, product diversification, basic record-keeping, digital promotion, and more reliable distribution arrangements. These are suggested programme targets, not outcomes measured in this pilot.

Support providers should connect technical training with follow-up mentoring, access to appropriate equipment, small-scale financing, food-safety guidance, and market connections. Financing was the most frequently reported constraint in the pilot responses, although the sample is too small to estimate the prevalence of this constraint in the wider MSME population. A needs-based programme could therefore assess each enterprise's bottleneck before assigning support. Programme evaluation should distinguish inputs (training and mentoring), outputs (implemented innovations), and outcomes (quality, market reach, sales, and business continuity).

For policy and programme design, incubation should be treated as a coordinated process that combines resources with implementation support. This approach is consistent with incubation frameworks that stress service fit, network access, and venture development rather than facility provision alone (Bergek & Norrman, 2008; Bruneel et al., 2012; Hackett & Dilts, 2004).

Theoretical and Practical Contributions

The study offers a preliminary conceptual distinction among three stages: incubation-related support as an enabling input, innovation as the application of knowledge and resources, and entrepreneurial creativity as the capacity to generate useful new ideas. This framing connects incubation research with innovation and creativity research (Amabile, 1997; Anderson et al., 2014;

OECD/Eurostat, 2018). Its value at this stage is primarily agenda-setting: it specifies a mechanism that can be examined in a larger, better-powered study.

Practically, the findings encourage local government, universities, cooperatives, and MSME support organisations to connect training with follow-up implementation, financing, technology, and market access. The proposed approach should be evaluated with observable indicators rather than relying solely on participants' perceptions of programme availability.

Conclusion

This exploratory pilot study examined the relationships among business incubation support, innovation, and entrepreneurial creativity among salted-fish processing MSMEs in Rantau Bayur, Indonesia. The supplied pilot analysis indicates a positive association between incubation-related support and innovation and a positive association between innovation and entrepreneurial creativity. The direct association between incubation support and creativity was negative and non-significant, while the estimated indirect association through innovation was positive.

These results should not be interpreted as confirmatory evidence of mediation. The sample of 11 respondents is too small for stable estimation of a 54-indicator measurement model, the innovation coefficient exceeds one, and discriminant validity between incubation support and innovation remains problematic. The study's principal contribution is therefore to identify a plausible mechanism for further investigation: support may be more useful when it is translated into implemented product and business-process innovations. Larger samples, improved measures, transparent reporting, and longitudinal evidence are required before substantive conclusions can be drawn.

Limitations and Future Research

Several limitations constrain interpretation. First, the sample comprises only 11 respondents for 54 indicators. The resulting measurement and path estimates are unlikely to be stable and cannot support population-level generalisation. Second, some indicator loadings are extremely low, while internal-consistency estimates are unusually high; this combination warrants item-level investigation rather than a conclusion that the scales are validated. Third, discriminant validity between incubation support and innovation is not established, as the HTMT estimate is 0.905 and the X–Z correlation exceeds the reported square root of AVE for X. Fourth, the cross-sectional, single-source design does not establish temporal order or causal mediation and may be affected by common-method variance.

Fifth, the source manuscript does not provide the complete questionnaire, recruitment procedure, survey dates, missing-data treatment, analysis code, or full bootstrap settings. These omissions limit reproducibility. Sixth, the source reports a total effect of X on Y that should be reconciled with the direct and indirect effects using the original statistical output. Authors should verify the calculation rather than assume that the reported values are internally consistent.

Future research should recruit a substantially larger sample based on an a priori power analysis and the complexity of the proposed model, rather than treating 100 respondents as a universal threshold (Hair et al., 2022; Kock & Hadaya, 2018). A target of 150–200 may be considered for planning purposes, but the final sample requirement should be justified using the anticipated effect size, model structure, measurement quality, and desired statistical power.

Researchers should refine the questionnaire through cognitive interviews and expert review, distinguish service inputs from implemented innovation outputs, and consider objective indicators such as product changes, production practices, packaging adoption, sales channels, and sales performance. A longitudinal or pre–post design would provide a stronger basis for investigating the proposed sequence.

CRediT Author Contribution Statement

Author contributions to this research: **Ita:** Conceptualization; Methodology; Investigation; Data curation; Formal analysis; Writing – original draft. **Saladdin Wirawan Effendy:** Conceptualization; Methodology; Validation; Supervision; Writing – review & editing. **Sela Taramita:** Conceptualization; Investigation; Data curation; Formal analysis; Writing – review & editing.

Declarations

Ethics approval: The source manuscript does not include an ethics approval number or an official determination from an institution.

Informed consent: Not applicable to the analysis of publicly accessible online reviews, subject to the relevant institutional and journal ethics requirements.

Data availability: The review corpus was collected from TripAdvisor. The authors should state whether the extracted review data can be shared, subject to platform terms of use and applicable data-protection requirements.

Conflict of interest: The authors declare that there are no conflicts of interest in this study.

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