

The Role of Entrepreneurial Support Programs in Territorial Economic Development: A Comprehensive Literature Review

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Abstract

Entrepreneurial support programs, including business incubators, accelerators, and innovation hubs, have become central instruments in regional economic development strategies worldwide. This comprehensive literature review examines how these programs contribute to territorial economic development by synthesizing empirical and theoretical research published between 2011 and 2026. The review addresses the research question: "How do entrepreneurial support programs contribute to territorial economic development?" Through systematic analysis of 15 peer-reviewed studies, this review identifies key mechanisms through which support programs impact territorial economies, including agglomeration effects, knowledge spillovers, firm survival and growth, employment creation, and innovation capacity building. The findings reveal that while incubators and accelerators generally produce positive economic outcomes, their effectiveness varies significantly based on program design, institutional context, and regional characteristics. Accelerators demonstrate stronger evidence of impact on firm survival and funding acquisition, while incubators show broader effects on regional innovation systems. The review highlights critical gaps in understanding the spatial boundaries of program effects, optimal design features for different territorial contexts, and long-term sustainability of economic impacts. This synthesis provides evidence-based insights for policymakers, practitioners, and researchers seeking to leverage entrepreneurial support programs for territorial economic development.

Keywords: entrepreneurial support programs, business incubators, accelerators, territorial economic development, regional innovation, entrepreneurship ecosystems.

1. Introduction

The relationship between entrepreneurship and territorial economic development has emerged as a critical area of scholarly inquiry and policy intervention over the past two decades. As global economies increasingly recognize the limitations of traditional industrial development strategies, attention has shifted toward fostering entrepreneurial ecosystems that can generate sustainable economic growth, innovation, and employment at the regional level. Central to this shift has been the proliferation of entrepreneurial support programs—structured interventions designed to nurture new ventures, facilitate knowledge transfer, and catalyze innovation within specific geographic territories.

Entrepreneurial support programs encompass a diverse array of organizational forms, including business incubators, accelerators, science parks, technology transfer offices, and co-working spaces. These programs share a common objective: to reduce the barriers facing early-stage ventures while simultaneously contributing to broader territorial development goals. The theoretical rationale for such interventions draws from multiple disciplinary traditions, including regional economics, innovation studies, and entrepreneurship research, which collectively emphasize the importance of localized knowledge spillovers, agglomeration economies, and institutional support structures in fostering entrepreneurial activity.

The proliferation of these programs has been remarkable. Governments at national, regional, and local levels have invested substantial resources in establishing and maintaining entrepreneurial support infrastructure, viewing it as a mechanism to stimulate innovation, create employment, attract talent, and enhance regional competitiveness. However, despite widespread adoption and significant public investment, fundamental questions remain about the effectiveness of these programs and the specific mechanisms through which they contribute to territorial economic development.

This literature review addresses the research question: "How do entrepreneurial support programs contribute to territorial economic development?" By synthesizing empirical and theoretical research published between 2011 and 2026, this review aims to provide a comprehensive understanding of the relationship between entrepreneurial support programs and

territorial economic outcomes. The review examines multiple dimensions of this relationship, including the types of support programs and their distinctive characteristics, the theoretical mechanisms linking program activities to territorial development, empirical evidence on economic impacts, and the contextual factors that moderate program effectiveness.

The significance of this review lies in its potential to inform evidence-based policymaking and program design. As regions worldwide compete for talent, investment, and innovation capacity, understanding how entrepreneurial support programs can effectively contribute to territorial development becomes increasingly critical. Moreover, given the substantial public resources allocated to these programs, rigorous assessment of their impacts and mechanisms is essential for accountability and continuous improvement.

The structure of this review proceeds as follows. Section 2 presents a comprehensive literature review organized into six thematic subsections that examine conceptual foundations, specific program types, ecosystem perspectives, impact mechanisms, and empirical evidence. Section 3 discusses key findings, identifies research gaps, and explores implications for policy and practice. Section 4 concludes by synthesizing the main insights and proposing directions for future research.

2. Literature Review

2.1 Conceptual Foundations of Entrepreneurial Support Programs

Entrepreneurial support programs represent structured interventions designed to facilitate the creation, survival, and growth of new ventures within specific territorial contexts. The conceptual foundations of these programs draw from multiple theoretical traditions that explain why geographic proximity and institutional support matter for entrepreneurial success and regional economic development.

At the core of entrepreneurial support programs lies the concept of co-location—the deliberate clustering of entrepreneurs, resources, and support services within defined physical spaces. Madaleno et al. (2018) provide a comprehensive framework for understanding co-location interventions, categorizing them as a family of programs that includes incubators, accelerators,

science parks, and co-working spaces. These programs function as "cities in miniature," generating agglomeration economies through three primary mechanisms: sharing of resources and infrastructure, matching of complementary skills and capabilities, and learning through knowledge exchange and collaboration. This framework builds on classical agglomeration theory while adapting it to the specific context of entrepreneurial development.

The theoretical rationale for entrepreneurial support programs also draws heavily from innovation systems theory, which emphasizes the importance of institutional infrastructure in facilitating knowledge creation and diffusion. Wang et al. (2020) conceptualize business incubators as critical components of regional innovation systems, arguing that their capacities—including resource provision, network facilitation, and knowledge intermediation—directly influence regional innovation performance. This perspective positions support programs not merely as service providers to individual firms but as institutional actors that shape the broader innovation environment within territories.

Resource-based perspectives provide additional theoretical grounding for understanding how support programs contribute to entrepreneurial success. New ventures typically face significant resource constraints, including limited financial capital, inadequate managerial expertise, and insufficient network connections. Entrepreneurial support programs address these constraints by providing access to physical infrastructure, business services, mentoring, and network connections that would otherwise be unavailable or prohibitively expensive for early-stage ventures. Martins et al. (2019) emphasize that incubators serve as resource aggregators, pooling various forms of capital—financial, human, social, and symbolic—that can be leveraged by participating ventures.

The spatial dimension of entrepreneurial support programs represents another critical conceptual element. These programs are inherently territorial interventions, designed to generate economic benefits within specific geographic boundaries. Lamine et al. (2018) introduce the concept of "incubation mechanisms" that operate at multiple spatial scales, from the individual firm level to the regional ecosystem level, arguing that effective programs must align their activities with the specific characteristics and needs of their territorial contexts. This multi-scalar perspective recognizes that program impacts extend beyond individual tenant firms to influence broader regional dynamics.

Recent conceptual work has also emphasized the evolutionary nature of entrepreneurial support programs and their adaptation to changing economic and technological conditions. The emergence of accelerators as a distinct program type reflects this evolution, with their intensive, time-bound model representing a departure from the longer-term, facility-based approach of traditional incubators. Madaleno et al. (2018) note that accelerators function as intensive "bootcamps" offering competitive entry, concentrated mentoring, and rapid skill development over 3-6 month periods, contrasting with incubators' flexible 1-5 year arrangements.

The conceptual foundations also acknowledge the importance of institutional context and governance structures. Public policy plays a central role in establishing and sustaining entrepreneurial support programs, particularly in emerging economies where market-based support infrastructure may be underdeveloped. Said et al. (2012) examine how government policy shapes incubator development in emerging economies, highlighting the role of strategic initiatives in creating supportive institutional environments for entrepreneurship and regional development.

2.2 Business Incubators and Regional Development

Business incubators represent the most established form of entrepreneurial support program, with a history spanning several decades and a global presence across diverse economic contexts. The relationship between business incubators and regional development has been extensively examined in the literature, revealing complex patterns of impact that vary across geographic, institutional, and economic contexts.

The fundamental premise underlying business incubators is that they can accelerate venture development while simultaneously contributing to regional economic objectives such as employment creation, innovation capacity building, and industrial diversification. Lamine et al. (2018) provide empirical evidence from multiple European regions demonstrating that technology business incubators contribute to sustainable regional development through several mechanisms: facilitating technology transfer from research institutions, supporting the emergence of knowledge-intensive firms, and fostering regional innovation networks. Their research emphasizes that incubator effectiveness depends critically on alignment between program activities and regional development priorities.

Geographic context significantly influences incubator impacts on regional development. Hong et al. (2017) examine technology business incubators in China, finding that these programs contribute to regional economic convergence by accelerating development in less-developed regions. Their analysis reveals that incubators can serve as instruments of regional policy, helping to reduce spatial inequalities by providing entrepreneurial infrastructure in areas that lack established innovation ecosystems. This finding suggests that incubators may have particularly important roles in peripheral or lagging regions.

The urban-rural dimension of incubator impact represents an important area of inquiry. Justinek (2025) conducts a mixed-methods assessment of incubators in Slovenian municipalities, finding differential impacts between urban and rural contexts. Urban incubators demonstrate stronger effects on firm growth and innovation outcomes, while rural incubators play more significant roles in retaining local talent and preventing brain drain. This research highlights the need for context-specific program design that recognizes the distinct challenges and opportunities facing different types of territories.

Scale and scope of incubator systems also matter for regional development outcomes. Olkiewicz et al. (2018) conduct a comparative analysis of incubator impacts in the United States and Poland, finding that the density and interconnectedness of incubator networks influence their aggregate regional effects. Regions with multiple, well-coordinated incubators demonstrate stronger economic impacts than those with isolated programs, suggesting that system-level characteristics matter as much as individual program features.

The relationship between incubators and regional innovation capacity has received substantial attention. Wang et al. (2020) develop a comprehensive framework linking incubator capacities to regional innovation performance, identifying four critical capacity dimensions: resource provision, business support services, network facilitation, and institutional legitimacy. Their empirical analysis of Chinese provinces reveals that incubator capacities significantly predict regional innovation outputs, measured through patent applications and high-tech firm formation. This research provides quantitative evidence that incubators function as innovation infrastructure, not merely as real estate providers.

Sector-specific incubators demonstrate particular relevance for regional development in technology-intensive industries. Lagos et al. (2011) examine IT-focused business incubators,

finding that specialized programs generate stronger regional impacts than generalist incubators by fostering industry clusters and facilitating knowledge spillovers within specific technological domains. This specialization allows incubators to develop deep expertise and networks within particular industries, enhancing their value proposition to tenant firms and their contribution to regional industrial development.

The coupling between incubator development and regional economic growth represents a dynamic, co-evolutionary process. Huang et al. (2018) analyze the coupling and coordination between incubators and regional economies across Chinese provinces, finding significant positive relationships but also identifying spatial variations in the degree of coordination. Their research reveals that synchronous development of incubators and regional economies has not been achieved in most areas, suggesting that incubator expansion must be carefully calibrated to regional economic conditions and absorptive capacity.

Public policy and institutional support play critical roles in determining incubator contributions to regional development. Araújo et al. (2013) examine public policies supporting business incubation in São Paulo, Brazil, demonstrating how coordinated policy frameworks can enhance incubator effectiveness in promoting regional entrepreneurship and socioeconomic development. Their analysis emphasizes the importance of multi-level governance structures that align national, regional, and local policies in support of incubation activities.

The performance of incubators in contributing to local economic development varies significantly across contexts. Corsi et al. (2014) assess business incubator performance in Italy, finding that incubators in regions with stronger entrepreneurial cultures and more developed innovation systems demonstrate superior economic impacts. This finding underscores the importance of complementary regional assets and the limitations of incubators as standalone interventions in weak entrepreneurial environments.

2.3 Accelerators and Territorial Innovation

Accelerators represent a more recent innovation in entrepreneurial support, distinguished from traditional incubators by their intensive, time-bound model and focus on rapid scaling. The relationship between accelerators and territorial innovation has emerged as an important research

area, with evidence suggesting that accelerators may generate distinct types of regional impacts compared to incubators.

The distinctive characteristics of accelerators shape their territorial impacts. Madaleno et al. (2018) identify key features that differentiate accelerators from incubators: competitive selection processes, cohort-based programming, intensive mentoring over 3-6 month periods, and culmination in demo days or pitch events. These features create a high-pressure environment designed to rapidly validate business models and prepare ventures for external investment. The intensity and selectivity of accelerators may generate different types of regional spillovers compared to the longer-term, more inclusive approach of incubators.

Empirical evidence suggests that accelerators demonstrate particularly strong effects on firm survival and access to external finance. Madaleno et al. (2018) report that top US accelerators can increase five-year survival rates by 10-15 percentage points compared to non-accelerated ventures. This enhanced survival translates into territorial benefits through sustained employment, tax revenues, and continued innovation activity. The ability of accelerators to connect ventures with investors represents a critical mechanism for territorial development, as it channels external capital into regional economies.

The role of accelerators in developing regional innovation ecosystems extends beyond direct impacts on participating ventures. Bliemel et al. (2016) examine accelerators in the Australian startup ecosystem, finding that these programs contribute to ecosystem development by creating networks among entrepreneurs, investors, and service providers. Accelerators function as ecosystem catalysts, bringing together diverse actors and facilitating connections that persist beyond individual program cohorts. This network-building function may be particularly valuable in emerging or peripheral innovation ecosystems that lack established connections to global capital and knowledge networks.

The spatial concentration of accelerator benefits represents an important consideration for territorial development policy. Madaleno et al. (2021) examine incubators and accelerators in urban economic development, finding that these programs tend to concentrate in major metropolitan areas, potentially exacerbating spatial inequalities. The competitive, investor-focused model of accelerators may be less suitable for peripheral regions that lack deep pools of

entrepreneurial talent and investment capital. This geographic concentration raises questions about the role of accelerators in balanced territorial development.

Accelerators demonstrate particular effectiveness in supporting high-growth, technology-intensive ventures that align with regional innovation priorities. The intensive mentoring and rapid iteration model of accelerators appears well-suited to ventures pursuing disruptive innovations or entering dynamic markets where speed to market is critical. However, this focus on high-growth potential may limit accelerator contributions to broader regional development objectives such as inclusive employment creation or support for traditional industries.

The relationship between accelerators and university-based innovation represents an important dimension of territorial impact. Some accelerators are embedded within university ecosystems, serving as mechanisms for commercializing academic research and retaining graduate talent within regions. These university-linked accelerators can strengthen regional innovation systems by facilitating knowledge transfer and creating pathways for research commercialization.

The performance of accelerators in different national and regional contexts varies significantly. Bliemel et al. (2016) note that Australian accelerators face challenges in replicating the success of leading US programs, reflecting differences in market size, investment capital availability, and entrepreneurial culture. This variation suggests that accelerator models may require adaptation to local conditions rather than direct transplantation of successful models from other contexts.

2.4 Entrepreneurship Ecosystems and Territorial Competitiveness

The ecosystem perspective on entrepreneurship has gained prominence in recent years, shifting attention from individual programs or ventures to the broader system of actors, institutions, and resources that support entrepreneurial activity within territories. This perspective provides important insights into how entrepreneurial support programs contribute to territorial competitiveness through their roles within larger ecosystem structures.

Entrepreneurship ecosystems encompass multiple interconnected elements, including entrepreneurs, support organizations, financial capital providers, educational institutions, government agencies, and established firms. Bliemel et al. (2016) emphasize that accelerators and

incubators function as nodes within these broader ecosystems, facilitating connections among ecosystem actors and channeling resources to early-stage ventures. The ecosystem perspective recognizes that program impacts depend not only on internal program features but also on the quality and density of ecosystem connections.

The development of entrepreneurship ecosystems represents a dynamic, path-dependent process influenced by regional history, institutional structures, and economic specializations. Regions with established innovation traditions and concentrations of knowledge-intensive industries tend to develop more robust entrepreneurship ecosystems, creating positive feedback loops that attract talent, capital, and entrepreneurial activity. Entrepreneurial support programs can accelerate ecosystem development, but their effectiveness depends on the presence of complementary ecosystem elements.

Territorial competitiveness in the contemporary economy increasingly depends on the capacity to generate and commercialize innovations, attract and retain talent, and adapt to technological and market changes. Entrepreneurship ecosystems contribute to territorial competitiveness by creating environments conducive to innovation, risk-taking, and rapid adaptation. Lamine et al. (2018) argue that technology business incubators enhance regional competitiveness by facilitating the emergence of knowledge-intensive firms that can compete in global markets.

The role of anchor institutions in ecosystem development represents an important consideration. Universities, research centers, and large established firms can serve as ecosystem anchors, providing knowledge, talent, and resources that support entrepreneurial activity. Madaleno et al. (2018) note that university involvement in incubators improves outcomes, sometimes positively affecting revenue, employment, and survival of tenant firms. This finding highlights the importance of institutional linkages in determining program effectiveness and ecosystem vitality.

Regional innovation systems theory provides a complementary framework for understanding how entrepreneurial support programs contribute to territorial competitiveness. Wang et al. (2020) conceptualize incubators as components of regional innovation systems, arguing that their capacities influence the overall innovation performance of territories.

This systems perspective emphasizes the importance of coordination among multiple innovation actors and the need for supportive institutional frameworks.

The spatial boundaries of entrepreneurship ecosystems represent a critical but often ambiguous dimension. While ecosystems are typically conceptualized at the regional or metropolitan level, the relevant geographic scale may vary depending on industry, technology, and institutional context. Madaleno et al. (2018) report that spillover effects in science parks disappear beyond 240 meters, suggesting that some ecosystem benefits are highly localized. However, other ecosystem connections, particularly those involving investment capital and market access, may operate at national or global scales.

The diversity and complementarity of ecosystem actors influence territorial competitiveness. Ecosystems that include diverse types of support organizations, funding sources, and entrepreneurial ventures demonstrate greater resilience and adaptability than those dominated by a single type of actor or industry. This diversity allows ecosystems to respond to changing economic conditions and technological opportunities.

Policy interventions aimed at ecosystem development must recognize the complex, emergent nature of ecosystem dynamics. While governments can invest in infrastructure, provide funding, and establish programs, they cannot directly engineer ecosystem emergence. Effective ecosystem policy focuses on removing barriers, facilitating connections, and creating conditions conducive to entrepreneurial activity rather than attempting to control ecosystem development.

2.5 Mechanisms of Territorial Economic Impact

Understanding the specific mechanisms through which entrepreneurial support programs contribute to territorial economic development is essential for effective program design and policy formulation. The literature identifies multiple pathways of impact, operating at different levels and time scales.

Agglomeration economies represent a fundamental mechanism linking entrepreneurial support programs to territorial development. Madaleno et al. (2018) explain that co-location interventions generate agglomeration benefits through three primary channels: sharing of resources and infrastructure, matching of complementary skills and capabilities, and learning

through knowledge exchange. These mechanisms reduce costs for individual ventures while increasing productivity and innovation capacity. The spatial concentration of entrepreneurial activity within incubators and accelerators creates miniature agglomeration economies that can seed broader regional clusters.

Knowledge spillovers constitute another critical mechanism of territorial impact. The co-location of entrepreneurs, mentors, and service providers facilitates informal knowledge exchange that extends beyond formal program activities. Madaleno et al. (2018) report that close co-location of researchers, especially in related fields, positively impacts collaboration and research quality. These spillovers can diffuse beyond program boundaries, influencing the broader regional knowledge base. However, the spatial decay of spillover effects suggests that proximity matters significantly, with benefits diminishing rapidly with distance.

Firm survival and growth represent direct mechanisms through which support programs contribute to territorial employment and economic output. Programs that increase the survival rates of new ventures generate sustained economic benefits through continued employment, tax revenues, and innovation activity. Madaleno et al. (2018) report that accelerators can increase five-year survival rates by 10-15 percentage points for participating ventures. Enhanced survival translates into cumulative territorial benefits as cohorts of supported ventures mature and expand.

Access to external finance represents a critical mechanism, particularly for high-growth ventures requiring substantial capital for scaling. Entrepreneurial support programs facilitate access to finance through multiple channels: direct provision of seed funding, connections to angel investors and venture capitalists, and preparation of ventures for investment through mentoring and business model refinement. Madaleno et al. (2018) find that incubators and accelerators generally increase participating firm employment and external funding. The ability to attract external capital into regional economies represents an important territorial benefit, as it supplements local resources and validates regional entrepreneurial activity.

Network development and social capital formation constitute important but often underappreciated mechanisms of territorial impact. Entrepreneurial support programs create structured opportunities for network formation among entrepreneurs, investors, mentors, and service providers. These networks can persist and expand beyond individual program participation, creating durable social infrastructure that supports ongoing entrepreneurial activity.

Bliemel et al. (2016) emphasize the role of accelerators in developing entrepreneurial networks that contribute to ecosystem vitality.

Human capital development represents another mechanism through which programs contribute to territorial competitiveness. The mentoring, training, and learning-by-doing experiences provided by support programs enhance the skills and capabilities of entrepreneurs. Even when individual ventures fail, the human capital developed through program participation remains within regions, contributing to future entrepreneurial activity or enhancing the capabilities of regional workforces. This human capital mechanism may be particularly important in peripheral regions seeking to retain talent.

Signaling and legitimacy effects represent more subtle mechanisms of territorial impact. The presence of recognized incubators or accelerators can signal regional commitment to entrepreneurship and innovation, influencing location decisions of entrepreneurs, investors, and firms. Successful programs can enhance regional reputation and brand, attracting attention and resources from external actors. Wang et al. (2020) identify institutional legitimacy as a critical capacity dimension of incubators that influences regional innovation performance.

Industrial diversification and structural transformation represent longer-term mechanisms through which support programs can contribute to territorial development. By supporting the emergence of new industries or the renewal of existing ones, programs can help regions adapt to changing economic conditions and reduce dependence on declining sectors. Hong et al. (2017) demonstrate that technology business incubators in China contribute to regional economic convergence by accelerating development in less-developed regions.

The temporal dynamics of impact mechanisms deserve attention. Some mechanisms, such as employment creation in supported ventures, may generate relatively immediate effects, while others, such as knowledge spillovers and ecosystem development, may require years or decades to fully materialize. This temporal variation has important implications for program evaluation and policy patience.

2.6 Empirical Evidence on Economic Outcomes

The empirical literature on entrepreneurial support programs and territorial economic development has grown substantially, employing diverse methodologies and examining various outcome measures across different geographic contexts. This section synthesizes key empirical findings regarding the economic impacts of these programs.

Employment creation represents one of the most commonly examined outcomes. Multiple studies provide evidence that incubators and accelerators contribute to employment growth, both directly through job creation in supported ventures and indirectly through spillover effects. Madaleno et al. (2018) report that incubators and accelerators generally increase participating firm employment. However, the magnitude of employment effects varies significantly across programs and contexts, with some studies finding modest impacts while others document substantial job creation.

Firm survival rates provide another important outcome measure. The evidence suggests that participation in support programs generally improves venture survival, though effect sizes vary. Madaleno et al. (2018) report that top US accelerators can increase five-year survival rates by 10-15 percentage points. These survival effects translate into sustained economic benefits for territories, as surviving ventures continue to employ workers, generate revenues, and contribute to regional innovation.

Access to external finance represents a critical outcome, particularly for high-growth ventures. The empirical evidence consistently shows that accelerators, in particular, significantly improve ventures' ability to attract external investment. Madaleno et al. (2018) find clear evidence that accelerators increase external funding for participating firms. This outcome is particularly important for territorial development, as it channels external capital into regional economies and validates regional entrepreneurial activity.

Regional innovation performance represents a broader outcome measure that captures the aggregate effects of support programs on territorial innovation capacity. Wang et al. (2020) provide empirical evidence from Chinese provinces that incubator capacities significantly predict regional innovation outputs, measured through patent applications and high-tech firm formation.

This research demonstrates that incubators function as innovation infrastructure with measurable regional impacts.

Economic convergence and spatial equity represent important outcomes from a territorial development perspective. Hong et al. (2017) find that technology business incubators in China contribute to regional economic convergence by accelerating development in less-developed regions. This finding suggests that support programs can serve as instruments of regional policy, helping to reduce spatial inequalities. However, other research indicates that programs tend to concentrate in already-developed regions, potentially exacerbating inequalities.

The relationship between incubator development and regional economic growth has been examined through coupling and coordination analysis. Huang et al. (2018) analyze this relationship across Chinese provinces, finding significant positive correlations but also identifying that synchronous development has not been achieved in most areas. This research highlights the importance of calibrating program expansion to regional economic conditions and absorptive capacity.

Sector-specific impacts have been documented in several studies. Lagos et al. (2011) examine IT-focused business incubators, finding that specialized programs generate stronger regional impacts than generalist incubators by fostering industry clusters. This finding suggests that program specialization aligned with regional economic strengths may enhance territorial impacts.

Comparative studies across national contexts reveal significant variation in program effectiveness. Olkiewicz et al. (2018) compare incubator impacts in the United States and Poland, finding differences in economic outcomes that reflect broader institutional and economic contexts. This variation underscores the importance of contextual factors in determining program effectiveness and the limitations of directly transplanting program models across contexts.

The evidence on revenue and profitability outcomes is more mixed. While some studies report positive effects of program participation on venture revenues, others find no significant impacts or effects that vary by program type and venture characteristics. Madaleno et al. (2018) note that university involvement in incubators sometimes positively affects revenue, suggesting that institutional linkages may enhance economic outcomes.

Long-term and indirect effects remain understudied in the empirical literature. Most evaluations focus on relatively short time horizons and direct effects on participating ventures, with limited attention to longer-term ecosystem development, knowledge spillovers, or broader regional economic impacts. This limitation reflects methodological challenges in attributing regional-level outcomes to specific programs and in tracking effects over extended periods.

The quality of empirical evidence varies significantly across studies. Madaleno et al. (2018) note that while there is clear evidence that programs are effective overall, we know little about how effects operate or who benefits. Many studies rely on descriptive analyses or simple comparisons without adequate controls for selection effects or confounding factors. Rigorous quasi-experimental or experimental designs remain relatively rare in this literature.

Geographic variation in outcomes represents an important empirical finding. Justinek (2025) documents differential impacts between urban and rural contexts in Slovenia, with urban incubators showing stronger effects on firm growth while rural incubators play more significant roles in talent retention. This variation highlights the need for context-specific program design and evaluation.

The empirical evidence also reveals important gaps and limitations. Bone et al. (2019) examine the impact of business accelerators and incubators in the UK, contributing to the growing body of evidence on program effectiveness in developed economies. However, significant gaps remain in understanding optimal program design features, the mechanisms through which effects operate, and the conditions under which programs are most effective.

3. Discussion

The synthesis of empirical and theoretical literature reveals a complex and nuanced picture of how entrepreneurial support programs contribute to territorial economic development. While the evidence generally supports the effectiveness of these programs, important questions remain regarding mechanisms, optimal design, contextual factors, and long-term sustainability of impacts.

Key Findings and Patterns

The literature demonstrates that entrepreneurial support programs contribute to territorial economic development through multiple, interconnected mechanisms. Agglomeration economies, knowledge spillovers, enhanced firm survival, improved access to finance, network development, and human capital formation all represent pathways through which programs generate territorial benefits. These mechanisms operate at different spatial and temporal scales, with some effects materializing quickly while others require years to fully develop.

A clear finding across multiple studies is that program effectiveness varies significantly by program type. Accelerators demonstrate particularly strong evidence of impact on firm survival rates and access to external finance, with top programs increasing five-year survival rates by 10-15 percentage points, Madaleno et al. (2018). This effectiveness likely reflects the intensive, selective nature of accelerator programming and their focus on preparing ventures for external investment. In contrast, incubators show broader but sometimes less dramatic effects, contributing to regional innovation systems, employment creation, and ecosystem development over longer time horizons, Lamine et al. (2018), Wang et al. (2020).

The importance of institutional context and linkages emerges as a consistent theme. Programs embedded within university ecosystems or connected to research institutions demonstrate superior outcomes compared to standalone programs, Madaleno et al. (2018). This finding underscores the value of institutional complementarities and suggests that effective programs leverage existing regional assets rather than operating in isolation. The coupling between incubator development and regional economic conditions further emphasizes the need for alignment between program expansion and regional absorptive capacity, Huang et al. (2018).

Geographic context significantly shapes program impacts and appropriate design features. Urban programs demonstrate stronger effects on firm growth and innovation outcomes, while rural programs play more important roles in talent retention and preventing brain drain, Justinek, G. (2025). This variation suggests that one-size-fits-all approaches are inappropriate and that program design should reflect the specific challenges and opportunities of different territorial contexts. The concentration of accelerators in major metropolitan areas raises concerns about spatial equity and

the potential for programs to exacerbate rather than reduce regional inequalities, Madaleno et al. (2021).

The spatial boundaries of program effects represent a critical but often overlooked dimension. Evidence suggests that some spillover effects, particularly those related to knowledge exchange and collaboration, are highly localized, disappearing beyond distances of 240 meters, Madaleno et al. (2018). This finding has important implications for program location decisions and for understanding the geographic scope of territorial benefits. However, other effects, particularly those related to investment capital and market access, may operate at broader spatial scales.

Research Gaps and Limitations

Despite substantial growth in research on entrepreneurial support programs, significant gaps remain. First, the literature lacks rigorous evidence on the mechanisms through which programs generate territorial impacts. While multiple pathways have been theorized, empirical research directly testing these mechanisms remains limited. As Madaleno et al. (2018) note, "we know little about how effects operate—or who benefits". This gap limits our ability to design programs that maximize territorial benefits and to understand the conditions under which different mechanisms are most effective.

Second, long-term and indirect effects remain understudied. Most evaluations focus on relatively short time horizons and direct effects on participating ventures, with limited attention to longer-term ecosystem development, sustained knowledge spillovers, or broader regional economic transformation. The temporal dynamics of program impacts deserve greater attention, particularly given that some mechanisms, such as ecosystem development and industrial diversification, may require decades to fully materialize.

Third, the literature provides limited guidance on optimal program design features for different territorial contexts. While studies document variation in program effectiveness across contexts, systematic research identifying which design features work best in which circumstances remains scarce. This gap is particularly problematic for policymakers in emerging economies or peripheral regions seeking to adapt program models to local conditions.

Fourth, the spatial dimensions of program impacts require more sophisticated analysis. Questions about the geographic scope of spillover effects, the relationship between program location and territorial benefits, and the potential for programs to exacerbate spatial inequalities deserve greater attention. The concentration of programs in already-developed regions raises important equity concerns that have not been adequately addressed in the literature.

Fifth, methodological limitations constrain the quality of evidence. Many studies rely on descriptive analyses or simple comparisons without adequate controls for selection effects or confounding factors. The self-selection of ventures into programs and the non-random location of programs across territories create significant identification challenges. More rigorous quasi-experimental and experimental designs are needed to establish causal relationships between program participation and economic outcomes.

Implications for Policy and Practice

The synthesis of evidence yields several important implications for policymakers and program managers. First, entrepreneurial support programs should be viewed as components of broader entrepreneurship ecosystems rather than standalone interventions. Program effectiveness depends critically on the presence of complementary ecosystem elements, including financial capital, talent, research institutions, and supportive regulatory frameworks. Policymakers should focus on ecosystem development rather than simply establishing programs in isolation.

Second, program design should reflect territorial context and development objectives. The evidence suggests that different program types and design features are appropriate for different contexts. Urban regions with established innovation ecosystems may benefit from intensive accelerator programs focused on high-growth ventures, while peripheral regions may require longer-term incubation support focused on talent retention and local economic diversification. Context-specific design is essential for maximizing territorial benefits.

Third, institutional linkages and partnerships enhance program effectiveness. Programs should actively cultivate connections with universities, research institutions, established firms, and other ecosystem actors. These linkages facilitate knowledge transfer, enhance program legitimacy,

and improve access to resources and networks. University-linked programs demonstrate particularly strong outcomes and should be prioritized where feasible, Madaleno et al. (2018).

Fourth, program evaluation should adopt longer time horizons and broader outcome measures. Short-term metrics focused solely on participating ventures provide incomplete pictures of territorial impacts. Evaluation frameworks should incorporate measures of ecosystem development, knowledge spillovers, regional innovation capacity, and broader economic outcomes. Longitudinal designs that track effects over multiple years are essential for understanding sustained impacts.

Fifth, policymakers should recognize the limitations of entrepreneurial support programs as instruments of regional development. While programs can contribute to territorial economic development, they are not panaceas for regional economic challenges. Their effectiveness depends on complementary investments in education, infrastructure, and institutional capacity. Regions with weak entrepreneurial cultures or limited innovation capacity may require broader institutional reforms before support programs can generate significant impacts, Corsi et al. (2014).

Sixth, attention to spatial equity is essential. The tendency for programs to concentrate in already-developed regions risks exacerbating spatial inequalities. Policymakers should consider targeted investments in peripheral regions, while recognizing that program models may require adaptation to local conditions. The role of programs in talent retention and preventing brain drain may be particularly important in peripheral region, Justinek, G. (2025).

Theoretical Contributions and Future Research Directions

This review contributes to theoretical understanding by synthesizing multiple perspectives on how entrepreneurial support programs contribute to territorial economic development. The integration of agglomeration theory, innovation systems theory, and ecosystem perspectives provides a comprehensive framework for understanding program impacts. The identification of multiple mechanisms operating at different spatial and temporal scales advances our understanding of the complex relationships between programs and territorial outcomes.

Future research should prioritize several directions. First, studies employing rigorous causal identification strategies are needed to establish the magnitude and mechanisms of program

impacts. Quasi-experimental designs leveraging natural experiments, regression discontinuity, or instrumental variables approaches could provide more credible evidence on program effectiveness. Randomized controlled trials, while challenging to implement, would provide gold-standard evidence.

Second, longitudinal research tracking program effects over extended periods is essential for understanding long-term and indirect impacts. Panel data designs following cohorts of ventures and tracking regional economic indicators over decades would illuminate the temporal dynamics of program impacts and the sustainability of benefits.

Third, comparative research examining program effectiveness across diverse contexts is needed to identify contingencies and boundary conditions. Systematic comparisons across national contexts, regional types, and program designs could reveal which features are universally effective and which require contextual adaptation.

Fourth, research on the spatial dimensions of program impacts deserves greater attention. Studies examining the geographic scope of spillover effects, the relationship between program location and territorial benefits, and the potential for programs to influence spatial inequalities would inform location decisions and equity considerations.

Fifth, research on ecosystem dynamics and the role of programs within broader entrepreneurship ecosystems is needed. Network analysis approaches examining connections among ecosystem actors and the role of programs as network nodes could illuminate ecosystem development processes. Agent-based modeling could explore the complex, emergent dynamics of ecosystem evolution.

Sixth, research on program design optimization is essential for translating evidence into practice. Experimental or quasi-experimental studies comparing alternative design features—such as program duration, selection criteria, service offerings, and governance structures—could identify best practices for different contexts and objectives.

4. Conclusion

This comprehensive literature review has examined how entrepreneurial support programs contribute to territorial economic development, synthesizing empirical and theoretical research published between 2011 and 2026. The analysis reveals that these programs—including business incubators, accelerators, and related interventions—contribute to territorial development through multiple mechanisms, including agglomeration economies, knowledge spillovers, enhanced firm survival and growth, improved access to finance, network development, and human capital formation.

The evidence demonstrates that entrepreneurial support programs generally produce positive economic outcomes, though effectiveness varies significantly based on program type, design features, institutional context, and regional characteristics. Accelerators show particularly strong evidence of impact on firm survival and funding acquisition, while incubators demonstrate broader effects on regional innovation systems and ecosystem development. Programs embedded within university ecosystems or connected to research institutions demonstrate superior outcomes, underscoring the importance of institutional linkages and complementarities.

Geographic context matters profoundly for program effectiveness and appropriate design. Urban programs demonstrate stronger effects on firm growth and innovation, while rural programs play more important roles in talent retention. The spatial concentration of programs in major metropolitan areas raises important equity concerns, as does the highly localized nature of some spillover effects. These findings suggest that program design must be tailored to territorial context and that policymakers must attend to spatial equity considerations.

Despite substantial progress in understanding entrepreneurial support programs and their territorial impacts, significant gaps remain. The mechanisms through which programs generate territorial benefits require more rigorous empirical investigation. Long-term and indirect effects remain understudied, as do the spatial dimensions of program impacts. Methodological limitations constrain the quality of available evidence, with many studies lacking adequate controls for selection effects and confounding factors.

For policymakers and practitioners, the evidence suggests several key principles. Programs should be viewed as components of broader entrepreneurship ecosystems rather than standalone interventions. Design should reflect territorial context and development objectives, with different approaches appropriate for different settings. Institutional linkages and partnerships enhance effectiveness and should be actively cultivated. Evaluation should adopt longer time horizons and broader outcome measures that capture ecosystem development and regional economic impacts beyond direct effects on participating ventures.

The relationship between entrepreneurial support programs and territorial economic development is complex, multifaceted, and context-dependent. While these programs represent valuable instruments for regional development policy, they are not panaceas for regional economic challenges. Their effectiveness depends on complementary investments in education, infrastructure, and institutional capacity, as well as on the presence of supportive entrepreneurship ecosystems. Regions seeking to leverage these programs for territorial development must attend carefully to program design, institutional linkages, and alignment with regional assets and development priorities.

Future research should prioritize rigorous causal identification strategies, longitudinal designs, comparative analyses across contexts, investigation of spatial dimensions, examination of ecosystem dynamics, and optimization of program design features. Such research would provide the evidence base needed to enhance program effectiveness and maximize contributions to territorial economic development.

In conclusion, entrepreneurial support programs represent important but not sufficient instruments for territorial economic development. When well-designed, appropriately contextualized, and embedded within supportive ecosystems, these programs can contribute meaningfully to regional innovation, employment creation, and economic competitiveness. However, realizing their potential requires careful attention to design, implementation, evaluation, and integration within broader regional development strategies. As regions worldwide compete for talent, investment, and innovation capacity, understanding and optimizing the role of entrepreneurial support programs in territorial development becomes increasingly critical for sustainable and equitable economic growth.

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