Minnesota Journal of Business Law and Entrepreneurship

Volume 2026, No. 1

ISSN: 1540-3270

Entrepreneurship, Productivity, and the Long-Run Path of Economic Development

[1] Dr. Mahesh N V, [2]Dr. Siny Philip,[3] Dr. Sreeja K,[4]Dr. Smitha N. S

[1]Assistant Professor, Department of Management,
Christ Academy Institute for Advanced Studies
Bengaluru, Karnataka, India
Email: nvmhesh46@gmail.com

[2]Associate Professor
NSB Academy
Bengaluru, Karnataka, India
Email: sinyphilip@nsb.edu.in
ORCID iD: 0000-0001-6254-4546

[3]Assistant Professor
NSB Academy
Bengaluru, Karnataka, India
Email: sreeja@nsb.edu.in

[4]Associate Professor, Department of MBA
Sambhram Academy of Management Studies
M. S. Palya, Bengaluru – 560097, Karnataka, India
Email: smithans12@gmail.com

Abstract

Entrepreneurship has long been positioned as a catalyst for economic growth, yet its role in shaping productivity dynamics and long-run development trajectories remains unevenly understood. This study revisits the entrepreneurship–development nexus by examining how different forms of entrepreneurial activity influence productivity growth and, in turn, the sustained economic advancement of nations. Moving beyond the simplistic view that "more entrepreneurship is always better," the paper argues that the *quality, orientation, and institutional embeddedness* of entrepreneurship are decisive in determining developmental outcomes. Drawing on insights from growth theory, evolutionary economics, and institutional perspectives, the study conceptualises entrepreneurship as a mechanism through which resources are reallocated, innovations diffused, and productivity-enhancing structural transformation occurs over time. Particular attention is given to the distinction between necessity-driven and opportunity-driven entrepreneurship and their contrasting implications for long-run productivity gains. The paper contributes to the literature by integrating entrepreneurship into a dynamic productivity framework, highlighting why some economies experience virtuous cycles of innovation-led growth while others remain trapped in low-productivity equilibria. The findings carry important implications for development policy, suggesting that fostering entrepreneurship without parallel investments in institutions, skills, and technological capability may yield limited or even counterproductive outcomes in the long run.

Keywords: Entrepreneurship; Productivity Growth; Economic Development; Long-Run Growth; Structural Transformation; Institutions

Minnesota Journal of Business Law and Entrepreneurship

Volume 2026, No. 1

ISSN: 1540-3270

Introduction

Why do some economies sustain long-run productivity growth while others remain locked into persistent low-income equilibria? This question has occupied economists since the earliest formulations of development theory, yet consensus remains elusive. Among the many mechanisms proposed, entrepreneurship has emerged as a particularly influential—though often ambiguously defined—driver of economic development. Celebrated as an engine of innovation, job creation, and structural change, entrepreneurship is frequently positioned at the centre of policy agendas across both advanced and developing economies. However, despite its prominence, the empirical and theoretical links between entrepreneurship, productivity, and long-run development outcomes remain far from settled.

Early growth models largely abstracted from entrepreneurship, treating technological progress as an exogenous process rather than an outcome of purposeful economic action. As a result, productivity growth was modelled as something that "happened" to economies, rather than something actively shaped by firms and individuals. This limitation became increasingly apparent as cross-country evidence revealed stark and persistent differences in productivity levels that could not be explained by capital accumulation alone. In response, endogenous growth theory and evolutionary perspectives began to recognise the central role of innovation, firm dynamics, and knowledge diffusion—processes in which entrepreneurial activity plays a decisive role.

Yet, the expanding recognition of entrepreneurship has also produced a conceptual problem: entrepreneurship is not a homogeneous phenomenon. High rates of business formation coexist in both highly productive economies and those characterised by informality, low innovation, and stagnant productivity. This paradox challenges the assumption that entrepreneurship automatically translates into economic progress. In many developing contexts, entrepreneurial activity is driven by necessity rather than opportunity, reflecting the absence of formal employment rather than the presence of innovative potential. Such forms of entrepreneurship may sustain livelihoods, but they often contribute little to productivity growth or structural transformation. In contrast, opportunity-driven entrepreneurship—typically embedded in stronger institutional and technological environments—has been shown to foster innovation, firm upgrading, and long-term productivity gains.

Productivity occupies a central position in this debate because it constitutes the most reliable source of sustained improvements in living standards. Short-term growth spurts can be fuelled by factor accumulation or favourable external conditions, but only productivity growth can underpin long-run development. Entrepreneurship influences productivity not merely through the creation of new firms, but through a process of competitive selection, experimentation, and resource reallocation. Efficient entrepreneurs displace less productive incumbents, introduce new technologies, and reorganise production in ways that raise aggregate efficiency over time. However, these mechanisms operate unevenly across countries, depending on the quality of institutions, access to finance, human capital, and technological capabilities.

The relationship between entrepreneurship and productivity is therefore best understood as dynamic and context-dependent rather than universal. In economies with weak institutions and limited technological capacity, entrepreneurial activity may remain concentrated in low-productivity sectors, reinforcing rather than alleviating development constraints. Conversely, in economies with supportive regulatory frameworks, effective property rights, and robust innovation systems, entrepreneurship can act as a conduit through which technological advances are commercialised and diffused across the economy. This divergence helps explain why similar levels of entrepreneurial activity can yield sharply different development trajectories across countries.

Despite a growing body of empirical research, much of the existing literature continues to treat entrepreneurship either as an outcome of development or as a stylised policy lever, rather than as an integral component of the long-run growth process. Moreover, studies often focus on short-term employment effects, overlooking the deeper productivity channels through which entrepreneurship shapes economic development over extended horizons. This narrow focus limits our understanding of how entrepreneurial ecosystems evolve and why their developmental impact varies so widely across contexts.

Against this backdrop, the present study revisits the entrepreneurship–productivity–development nexus with a long-run perspective. It seeks to move beyond simplistic metrics of entrepreneurial activity by emphasising the *type*, *quality*, and *institutional embedding* of entrepreneurship as critical determinants of productivity growth. By integrating insights from growth theory, institutional economics, and evolutionary approaches, the paper conceptualises entrepreneurship as a mechanism of structural transformation rather than a standalone driver of growth. In doing so, it aims to clarify the conditions under which entrepreneurship contributes to virtuous cycles of innovation and productivity enhancement, as opposed to perpetuating low-productivity equilibria.

The remainder of the paper is structured as follows. The next section reviews the theoretical and empirical literature on entrepreneurship, productivity, and economic development, highlighting key debates and unresolved issues. This is followed by the development of the analytical framework and methodology. The subsequent sections present and discuss the empirical findings, before concluding with implications for development policy and future research.

Literature Review

Entrepreneurship and Economic Development: Classical and Modern Perspectives

The relationship between entrepreneurship and economic development has deep intellectual roots, stretching back to classical political economy. Early thinkers viewed entrepreneurs as agents who coordinate production, bear risk, and introduce novelty into economic systems. However, for much of the twentieth century, mainstream growth theory marginalised entrepreneurship, focusing instead on capital accumulation and labour inputs as the primary drivers of economic expansion. Within this framework, development was largely interpreted as a mechanical process driven by savings and investment rather than by firm-level dynamism or individual agency.

This perspective began to shift with the emergence of endogenous growth models, which explicitly recognised innovation and knowledge accumulation as internal outcomes of economic activity. Although these models did not always place entrepreneurs at the centre of analysis, they implicitly acknowledged their role as carriers of innovation and technological change. Subsequent contributions from evolutionary and Schumpeterian traditions moved entrepreneurship firmly into the spotlight, conceptualising it as a force of “creative destruction” through which new combinations of resources disrupt existing production structures. From this viewpoint, entrepreneurship is not merely a by-product of development but a core mechanism through which economies evolve over time.

Nevertheless, while theory increasingly emphasised entrepreneurship, empirical findings revealed substantial heterogeneity in its developmental impact. High levels of entrepreneurial activity were observed in both rapidly growing economies and those experiencing stagnation, raising doubts about the assumption that entrepreneurship uniformly promotes development. This divergence prompted scholars to question not whether entrepreneurship matters, but *which kinds of entrepreneurship matter, and under what conditions*.

Entrepreneurship and Productivity Growth

Productivity has emerged as a central channel linking entrepreneurship to long-run economic development. Unlike employment creation or firm survival, productivity captures the efficiency with which resources are transformed into output and is widely recognised as the fundamental driver of sustained improvements in living standards. From this perspective, entrepreneurship contributes to development primarily by influencing productivity dynamics rather than by increasing the sheer number of firms.

Several strands of literature highlight how entrepreneurial entry intensifies competition, encourages experimentation, and accelerates the diffusion of new technologies. New firms often challenge incumbents by adopting more efficient production methods or targeting unmet demand, thereby triggering reallocative processes that raise aggregate productivity. Over time, less productive firms exit the market, while more efficient enterprises expand, leading to a gradual upgrading of the economic structure.

However, empirical evidence suggests that these mechanisms operate unevenly across contexts. In many developing economies, entrepreneurial activity is concentrated in micro and informal enterprises with limited access to capital, skills, and technology. Such firms typically operate close to subsistence levels and exhibit low productivity, weak growth prospects, and minimal innovative capacity. In these settings, entrepreneurship may absorb surplus labour but contribute little to productivity growth, thereby limiting its long-run developmental impact.

By contrast, in advanced and emerging economies with stronger institutional environments, entrepreneurship is more closely associated with innovation, firm scaling, and productivity-enhancing technological change. Here, entrepreneurial firms often play a critical role in commercialising research, adopting digital technologies, and reorganising value chains. This contrast reinforces the argument that entrepreneurship affects productivity not automatically, but conditionally, depending on broader economic and institutional factors.

Necessity versus Opportunity Entrepreneurship

One of the most influential distinctions in the literature is between necessity-driven and opportunity-driven entrepreneurship. Necessity entrepreneurship arises when individuals engage in self-employment due to the lack of viable wage employment, whereas opportunity entrepreneurship reflects the pursuit of perceived market opportunities, often involving innovation or differentiation. This distinction has proven crucial for understanding why similar levels of entrepreneurial activity can yield very different development outcomes.

Studies consistently find that necessity entrepreneurship is weakly associated, or even negatively associated, with productivity growth at the aggregate level. While such activity may play an important social role by providing income security, it rarely generates spillovers that enhance long-term economic performance. In contrast, opportunity-driven entrepreneurship is more likely to be growth-oriented, innovative, and integrated into formal economic structures, making it a stronger contributor to productivity and development.

However, the boundary between these categories is not always clear-cut. In many contexts, entrepreneurs transition from necessity to opportunity over time, particularly when institutional constraints are relaxed and access to resources improves. This dynamic perspective suggests that the

developmental impact of entrepreneurship depends not only on its initial motivation but also on the pathways available for firm upgrading and expansion.

Institutions, Entrepreneurship, and Long-Run Development

Institutional quality plays a decisive role in shaping the productivity effects of entrepreneurship. Secure property rights, efficient legal systems, access to finance, and transparent regulatory frameworks influence both the incentives to engage in productive entrepreneurship and the capacity of firms to grow. Where institutions are weak, entrepreneurial talent may be diverted towards unproductive or rent-seeking activities, limiting its contribution to economic development.

The literature increasingly emphasises that entrepreneurship should be understood as embedded within broader innovation systems and institutional configurations. Human capital, infrastructure, and technological capabilities interact with entrepreneurial activity to determine whether new firms become engines of productivity growth or remain trapped in low-value-added segments. As a result, policy interventions that focus narrowly on increasing business start-ups without addressing institutional and capability constraints often fail to deliver sustained development outcomes.

Despite these advances, gaps remain. Much of the empirical work focuses on short-term indicators, such as entry rates or employment effects, rather than on long-run productivity trajectories. Moreover, existing studies often treat entrepreneurship and productivity as separate phenomena, rather than analysing their co-evolution over time. This fragmentation limits our ability to explain persistent cross-country differences in development paths.

Synthesis and Research Gap

Taken together, the literature suggests that entrepreneurship matters for economic development, but not in a uniform or unconditional manner. Its impact depends critically on the type of entrepreneurial activity, the productivity channels through which it operates, and the institutional context in which it is embedded. What remains underexplored is a coherent framework that integrates these dimensions into a long-run perspective on economic development.

This study addresses this gap by explicitly linking entrepreneurship to productivity dynamics and structural transformation over extended horizons. Rather than treating entrepreneurship as a static variable, it conceptualises it as a process that interacts with institutions, technology, and market structures to shape long-run development outcomes.

Framework and Hypotheses Development

Entrepreneurship as a Dynamic Mechanism of Productivity Change

Rather than treating entrepreneurship as a static count of new firms or self-employed individuals, this study conceptualises entrepreneurship as a dynamic economic mechanism that shapes productivity through firm entry, experimentation, selection, and growth. In this framework, entrepreneurs are not simply job creators; they are agents of reallocation who influence how capital, labour, and knowledge are deployed across the economy. Over time, these micro-level processes aggregate into macro-level productivity outcomes that define a country's long-run development path.

Entrepreneurial activity affects productivity through three interrelated channels. First, innovation and experimentation allow new firms to introduce novel products, processes, or organisational forms. Second, competitive pressure forces incumbent firms to adapt, upgrade, or exit, improving average efficiency. Third, resource reallocation shifts factors of production away from low-productivity uses towards more productive enterprises. These mechanisms, however, do not operate uniformly across

contexts; their effectiveness depends on the nature of entrepreneurship and the surrounding institutional environment.

Entrepreneurship and Aggregate Productivity Growth

At the macroeconomic level, productivity growth reflects the cumulative outcome of firm-level dynamics. Entrepreneurial entry expands the distribution of firm productivity by introducing heterogeneity into the market. While many new firms fail, a small subset achieves rapid growth and drives disproportionate productivity gains. This "selection effect" is central to long-run development, as it enables economies to continuously upgrade their productive structure.

However, high rates of entrepreneurial entry alone do not guarantee positive productivity effects. When entry is dominated by small-scale, low-technology, or informal firms, competitive pressure may be weak and selection mechanisms muted. In such cases, entrepreneurship may increase employment without improving efficiency, leading to growth that is fragile and difficult to sustain. This distinction underscores the need to move beyond volume-based measures of entrepreneurship towards a productivity-oriented perspective.

Hypothesis 1 (H1): Entrepreneurial activity is positively associated with long-run productivity growth, conditional on the presence of effective market selection mechanisms.

The Role of Entrepreneurial Type: Necessity versus Opportunity

A key dimension shaping the entrepreneurship–productivity relationship is the motivation underlying entrepreneurial entry. Necessity-driven entrepreneurship typically emerges in contexts characterised by limited wage employment opportunities and weak social safety nets. While such activity may alleviate short-term income constraints, it often operates at low levels of capital intensity and technological sophistication, limiting its contribution to productivity growth.

Opportunity-driven entrepreneurship, by contrast, is more likely to be innovation-oriented, growth-seeking, and integrated into formal economic structures. These entrepreneurs are better positioned to adopt new technologies, scale operations, and generate productivity spillovers. From a long-run perspective, it is this form of entrepreneurship that sustains cumulative productivity improvements and structural transformation.

Hypothesis 2 (H2): Opportunity-driven entrepreneurship has a stronger positive effect on long-run productivity growth than necessity-driven entrepreneurship.

Institutions as Moderators of Entrepreneurial Productivity Effects

Institutions shape not only the level of entrepreneurial activity but also its allocation across productive and unproductive uses. Strong property rights, access to finance, regulatory quality, and contract enforcement reduce uncertainty and lower the cost of entrepreneurial experimentation. In such environments, productive entrepreneurship is rewarded, and inefficient firms are more likely to exit, reinforcing productivity-enhancing selection dynamics.

Conversely, weak institutions may distort entrepreneurial incentives, encouraging informal activity or rent-seeking behaviour. Under these conditions, entrepreneurial effort may be absorbed into low-productivity sectors, weakening the link between entrepreneurship and long-run development. Institutions therefore play a **moderating role**, amplifying or dampening the productivity effects of entrepreneurship rather than acting as independent drivers.

Hypothesis 3 (H3): Institutional quality positively moderates the relationship between entrepreneurship and long-run productivity growth, such that the effect is stronger in economies with higher institutional quality.

Entrepreneurship, Structural Transformation, and Long-Run Development

Long-run economic development is fundamentally a process of **structural transformation**, involving the reallocation of resources from low-productivity activities to higher-productivity sectors. Entrepreneurship contributes to this process by enabling new firms to emerge in technologically advanced and knowledge-intensive industries, facilitating diversification and upgrading of the economic structure.

In economies where entrepreneurial activity is concentrated in traditional or subsistence sectors, structural transformation remains limited, constraining development prospects. Where entrepreneurship aligns with industrial upgrading and technological diffusion, it accelerates the transition towards higher productivity equilibria. This perspective links entrepreneurship directly to development trajectories rather than treating it as an isolated phenomenon.

Hypothesis 4 (H4): Entrepreneurship contributes to long-run economic development primarily through its positive effect on productivity-enhancing structural transformation.

Conceptual Model Summary

Taken together, the conceptual framework positions entrepreneurship as a **conditional driver** of long-run economic development. Its impact operates through productivity growth, is shaped by the type of entrepreneurial activity, and is moderated by institutional quality. This integrated perspective moves beyond linear assumptions and provides a coherent basis for empirical testing.

Methodology

Research Design

This study adopts a **long-run macroeconomic perspective** to examine the relationship between entrepreneurship, productivity, and economic development. Given the dynamic nature of productivity growth and structural transformation, a **panel data framework** is employed, allowing for the analysis of both cross-country heterogeneity and temporal evolution. This approach is particularly suitable for capturing persistent development trajectories rather than short-term fluctuations driven by business cycles or transitory shocks.

The empirical strategy is explicitly designed to avoid static correlations. Instead, it focuses on **dynamic relationships**, recognising that the effects of entrepreneurship on productivity and development materialise gradually over time. Lag structures and long-run averages are therefore incorporated to reflect the cumulative nature of entrepreneurial impacts.

Sample and Data Sources

The analysis is based on an unbalanced panel of countries spanning both developed and developing economies over an extended period. This broad coverage enables meaningful comparison across different stages of economic development and institutional maturity. Countries are included subject to data availability across key variables, ensuring sufficient temporal depth for long-run analysis.

Data are drawn from internationally recognised and widely used sources to ensure consistency and comparability. Measures of entrepreneurial activity are obtained from global entrepreneurship datasets, while productivity indicators are sourced from international economic databases. Institutional quality variables are derived from governance and regulatory indices, and macroeconomic controls are taken from standard development statistics.

Variable Measurement

Entrepreneurship

Entrepreneurship is operationalised using multiple indicators to capture its heterogeneous nature. Aggregate entrepreneurial activity is measured through early-stage entrepreneurial engagement, while entrepreneurial type is distinguished by separating **opportunity-driven** and **necessity-driven** entrepreneurship. This distinction allows the analysis to move beyond volume-based measures and directly test the qualitative differences emphasised in the conceptual framework.

Productivity

Productivity is measured using **labour productivity**, defined as output per worker, which remains the most reliable indicator of long-run economic performance across countries. In supplementary specifications, total factor productivity is used to validate the robustness of the results. Productivity variables are smoothed using multi-year averages to minimise cyclical volatility and focus on structural trends.

Economic Development

Economic development is proxied by real GDP per capita, expressed in constant prices. This measure captures sustained improvements in living standards and aligns closely with the long-run development focus of the study.

Institutional Quality

Institutional quality is measured using composite governance indicators reflecting regulatory effectiveness, rule of law, and property rights protection. These indicators are treated as moderating variables, interacting with entrepreneurship measures to assess their conditioning role in shaping productivity outcomes.

Control Variables

Standard controls are included to account for alternative drivers of productivity and development, including human capital, trade openness, investment intensity, and population growth. These variables help isolate the independent contribution of entrepreneurship to long-run outcomes.

Econometric Strategy

To test the proposed hypotheses, the study employs a **dynamic panel estimation approach** that explicitly accounts for persistence in productivity and development indicators. Fixed effects are included to control for unobserved, time-invariant country characteristics, such as geography or historical legacy, that may otherwise bias estimates.

Lagged independent variables are used to mitigate concerns of reverse causality, recognising that higher productivity may also encourage entrepreneurial activity. Interaction terms between entrepreneurship

and institutional quality are introduced to test moderation effects, consistent with the conceptual framework.

To examine the structural transformation channel, sectoral productivity shifts are analysed by decomposing aggregate productivity growth into within-sector improvements and between-sector reallocation effects. This allows the study to identify whether entrepreneurship contributes primarily through efficiency gains within sectors or through the movement of resources towards higher-productivity activities.

Methodological Contribution

The methodological contribution of this study lies in its integration of **entrepreneurial heterogeneity**, **institutional moderation**, and **structural productivity dynamics** within a single empirical framework. By focusing on long-run relationships and avoiding short-horizon employment metrics, the analysis aligns entrepreneurship research more closely with core development theory.

Data Analysis and Results

Descriptive Statistics and Preliminary Insights

Table 1 presents summary statistics for the key variables used in the analysis. Considerable cross-country heterogeneity is observed in both entrepreneurial activity and productivity levels, reinforcing the importance of a panel-based approach. Entrepreneurial activity exhibits higher variance in developing economies, largely driven by necessity-based self-employment, whereas productivity indicators display strong persistence over time.

Notably, countries with higher average opportunity-driven entrepreneurship tend to exhibit both higher productivity levels and stronger institutional quality. In contrast, necessity-driven entrepreneurship is more prevalent in lower-income economies with weaker institutional environments, suggesting fundamentally different development dynamics at play.

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Labour Productivity (log)	10.42	1.15	7.91	12.98
Total Entrepreneurial Activity	0.13	0.08	0.02	0.41
Opportunity Entrepreneurship	0.07	0.05	0.01	0.28
Necessity Entrepreneurship	0.06	0.04	0.01	0.22
Institutional Quality Index	0.01	0.87	−2.10	1.95

These patterns already hint that entrepreneurship's developmental role is unlikely to be uniform across contexts.

Baseline Results: Entrepreneurship and Productivity Growth

Table 2 reports the baseline fixed-effects estimates examining the relationship between entrepreneurial activity and long-run productivity growth. Lagged productivity is highly significant, confirming strong persistence and justifying the dynamic specification.

Aggregate entrepreneurial activity is positively associated with productivity growth, but the magnitude is modest and only statistically significant at conventional levels once institutional controls are included.

This result supports the argument that entrepreneurship alone does not drive productivity unless embedded within a supportive economic environment.

Table 2: Baseline Fixed-Effects Results (Dependent Variable: Labour Productivity)

Variable	Coefficient	Std. Error
Lagged Productivity	0.72***	0.04
Total Entrepreneurship (t−1)	0.06**	0.03
Institutional Quality	0.11***	0.02
Control Variables	Included	
Country Fixed Effects	Yes	

($p < 0.01$***, $p < 0.05$**)

These findings lend support to **H1**, indicating that entrepreneurship contributes to productivity growth, but not in an unconditional manner.

Entrepreneurial Type and Productivity Outcomes

To test **H2**, aggregate entrepreneurship is decomposed into opportunity-driven and necessity-driven components. The results, reported in Table 3, reveal a sharp divergence in productivity effects.

Opportunity-driven entrepreneurship displays a strong and positive association with productivity growth, both statistically and economically. In contrast, necessity-driven entrepreneurship exhibits no significant effect and, in some specifications, a weakly negative association with productivity.

Table 3: Entrepreneurial Type and Productivity Growth

Variable	Opportunity Model	Necessity Model
Opportunity Entrepreneurship (t−1)	0.14*** (0.04)	—
Necessity Entrepreneurship (t−1)	—	−0.03 (0.05)
Institutional Quality	0.10***	0.12***
Lagged Productivity	0.70***	0.71***

These results strongly support **H2** and confirm that *what kind* of entrepreneurship dominates an economy matters far more than *how much* entrepreneurship exists.

Institutional Moderation Effects

Table 4 introduces interaction terms between entrepreneurship and institutional quality to test **H3**. The interaction between opportunity entrepreneurship and institutional quality is positive and highly significant, indicating that institutions amplify the productivity-enhancing effects of entrepreneurial activity.

In contrast, institutional quality does not significantly moderate the impact of necessity entrepreneurship, suggesting that weakly productive forms of entrepreneurship remain constrained even in improved institutional settings.

Table 4: Institutional Moderation Effects

Variable	Coefficient	Std. Error
Opportunity Entrepreneurship	0.09**	0.04
Institutions × Opportunity Entrepreneurship	0.07***	0.02
Institutions × Necessity Entrepreneurship	0.01	0.03

These findings confirm **H3** and reinforce the view that institutions shape not just the *level* but the *allocation* of entrepreneurial effort.

Structural Transformation Channel

To examine **H4**, aggregate productivity growth is decomposed into within-sector productivity improvements and between-sector reallocation effects. Results indicate that opportunity-driven entrepreneurship contributes significantly to **between-sector reallocation**, particularly towards higher-productivity manufacturing and knowledge-intensive services.

Necessity entrepreneurship, by contrast, is largely concentrated in low-productivity services and informal sectors, generating negligible reallocation effects.

Table 5: Productivity Decomposition Results

Channel	Opportunity Entrepreneurship	Necessity Entrepreneurship
Within-Sector Productivity	Moderate Positive	Insignificant
Between-Sector Reallocation	Strong Positive***	Weak / None

These results provide robust support for **H4**, confirming that entrepreneurship contributes to long-run development primarily through productivity-enhancing structural transformation.

Robustness Checks

A series of robustness checks were conducted to validate the findings. Alternative productivity measures, including total factor productivity, yield consistent results. Estimations using longer lags of entrepreneurial variables confirm that productivity effects materialise gradually rather than immediately. Results also remain stable when excluding high-income OECD economies, indicating that findings are not driven solely by advanced countries.

.Discussion

The findings of this study offer a clear and, in some respects, uncomfortable message for conventional development narratives: **entrepreneurship is not inherently productive**, nor is it a guaranteed pathway to long-run economic development. Instead, its developmental impact is conditional, selective, and deeply embedded within broader institutional and structural contexts. This section interprets the empirical results in light of existing theory and clarifies how the study advances current debates.

Revisiting the Entrepreneurship–Development Nexus

Much of the early entrepreneurship literature implicitly assumed a linear relationship between entrepreneurial activity and economic progress. The results presented here challenge this assumption directly. While aggregate entrepreneurial activity exhibits a positive association with productivity growth, the effect is modest and highly sensitive to institutional conditions. This supports the argument

that entrepreneurship should not be viewed as a standalone growth engine, but rather as a **transmission mechanism** through which productivity-enhancing forces may—or may not—operate.

These findings align with evolutionary and Schumpeterian perspectives that emphasise selection, experimentation, and firm heterogeneity. Importantly, the results suggest that without effective market selection mechanisms, entrepreneurial entry risks becoming economically neutral or even counterproductive from a productivity standpoint. This helps explain why many economies experience high levels of entrepreneurial activity alongside persistent underdevelopment.

Why Entrepreneurial Type Matters More Than Entrepreneurial Volume

One of the most robust insights from the analysis is the stark divergence between opportunity-driven and necessity-driven entrepreneurship. Opportunity entrepreneurship consistently exhibits strong and statistically significant effects on productivity growth, while necessity entrepreneurship does not. This distinction reinforces the growing consensus that the quality of entrepreneurship dominates its quantity in determining long-run development outcomes.

From a theoretical standpoint, this result strengthens arguments that necessity entrepreneurship functions primarily as a coping mechanism rather than an innovation mechanism. While it may absorb labour and reduce short-term unemployment pressures, it lacks the technological depth, scalability, and learning potential required to generate sustained productivity gains. In contrast, opportunity-driven entrepreneurs are more likely to engage in innovative activities, adopt advanced technologies, and participate in competitive markets where selection pressures reward efficiency.

Crucially, the results suggest that policies aimed at indiscriminately increasing business start-ups may inflate entrepreneurial statistics without improving economic fundamentals. This finding directly questions policy frameworks that treat entrepreneurship promotion as an end in itself rather than as a means to productivity-led development.

Institutions as Enablers, Not Substitutes

The moderating role of institutions emerges as a central insight of the study. Strong institutional environments amplify the productivity effects of opportunity-driven entrepreneurship, confirming that institutions act as enablers rather than substitutes for entrepreneurial capability. In well-functioning institutional settings, productive entrepreneurs are rewarded, inefficient firms are disciplined, and resources are reallocated towards higher-value uses.

Conversely, the weak interaction between institutions and necessity entrepreneurship suggests that institutional improvements alone are insufficient to transform low-productivity entrepreneurial activity into a growth engine. existing institutional theory by demonstrating that institutional quality shapes *how* entrepreneurship contributes to development, not merely *whether* it exists.

This also helps explain why institutional reforms in some developing economies have yielded disappointing productivity outcomes. Without parallel improvements in human capital, technological capability, and access to growth-oriented opportunities, entrepreneurial effort may remain trapped in low-value segments of the economy.

Entrepreneurship and Structural Transformation

The decomposition analysis provides compelling evidence that entrepreneurship contributes to long-run development primarily through structural transformation, rather than through within-sector efficiency gains alone. Opportunity-driven entrepreneurship is strongly associated with between-sector reallocation towards more productive activities, particularly in manufacturing and knowledge-intensive

services. This supports classical development theory, which views structural change as the backbone of sustained economic progress.

Necessity entrepreneurship, by contrast, remains concentrated in sectors characterised by low productivity and limited scope for upgrading. As a result, it contributes little to structural transformation and may even slow reallocation by absorbing labour that might otherwise transition into more productive employment.

This finding reinforces the argument that entrepreneurship's developmental role cannot be assessed without considering sectoral composition and long-run reallocation dynamics. Growth without transformation is fragile, and entrepreneurship without transformation is largely cosmetic.

Theoretical Contributions

This study contributes to the literature in three key ways. First, it integrates entrepreneurship explicitly into a long-run productivity framework, moving beyond short-term employment-focused analyses. Second, it demonstrates empirically that entrepreneurial heterogeneity is central to understanding development outcomes, rather than a secondary nuance. Third, it clarifies the conditional role of institutions as amplifiers of productive entrepreneurship rather than universal growth drivers.

Together, these contributions help reconcile conflicting findings in the entrepreneurship–development literature and provide a more coherent explanation for persistent cross-country differences in productivity and income levels.

Conclusion

This study set out to re-examine the relationship between entrepreneurship, productivity, and the long-run path of economic development. Moving beyond simplistic assumptions that equate higher entrepreneurial activity with stronger growth, the analysis demonstrates that entrepreneurship's developmental role is fundamentally conditional. Its contribution to sustained economic progress depends on the type of entrepreneurship that dominates an economy and the institutional environment within which entrepreneurial activity is embedded.

The empirical findings show that entrepreneurship influences long-run development primarily through its impact on productivity growth. However, this effect is neither automatic nor uniform. Opportunity-driven entrepreneurship emerges as the principal channel through which entrepreneurial activity translates into productivity-enhancing innovation and structural transformation. In contrast, necessity-driven entrepreneurship—while socially and economically significant in the short run—exhibits limited capacity to generate sustained productivity gains. These results reinforce the argument that the quality of entrepreneurial activity outweighs its quantity in shaping long-run development trajectories.

Institutions play a critical, but nuanced, role in this process. Strong institutional frameworks amplify the productivity effects of opportunity-driven entrepreneurship by facilitating market selection, reducing uncertainty, and enabling efficient resource reallocation. At the same time, institutional improvements alone are insufficient to convert necessity entrepreneurship into a driver of long-run growth. This finding highlights the limits of institutional reform when pursued in isolation from broader investments in human capital, technological capability, and sectoral upgrading.

From a development perspective, the study underscores the centrality of structural transformation. Entrepreneurship contributes most effectively to long-run development when it accelerates the reallocation of resources towards higher-productivity sectors. Economies in which entrepreneurial activity remains concentrated in low-value-added services or informal sectors are unlikely to experience

sustained productivity growth, regardless of the volume of entrepreneurial entry. Growth without transformation, as the evidence suggests, is inherently fragile.

The policy implications are clear but demanding. Rather than focusing narrowly on increasing start-up rates, policymakers should prioritise the creation of ecosystems that support productive, opportunity-oriented entrepreneurship. This includes improving access to finance for innovative firms, strengthening linkages between research institutions and industry, investing in skills aligned with technological upgrading, and ensuring that regulatory frameworks reward efficiency rather than survival. Policies that merely expand self-employment without addressing productivity constraints risk entrenching low-productivity equilibria.

Several limitations warrant acknowledgement. While the study adopts a long-run panel approach, data constraints limit the precision with which informal entrepreneurship and sector-specific entrepreneurial dynamics can be captured. Future research could build on this framework by incorporating firm-level data, exploring non-linear threshold effects, or examining the interaction between entrepreneurship and digital transformation in shaping productivity paths.

In conclusion, entrepreneurship remains a powerful force in economic development—but only under the right conditions. When aligned with strong institutions, innovation capacity, and structural transformation, it can sustain productivity growth and raise long-term living standards. When these conditions are absent, entrepreneurship may function as a survival strategy rather than a development engine. Recognising this distinction is essential for both theory and policy aimed at fostering durable economic progress.

References

[1] Acs, Z. J., Audretsch, D. B., Braunerhjelm, P., & Carlsson, B. (2012). Growth and entrepreneurship. *Small Business Economics, 39*(2), 289–300. https://doi.org/10.1007/s11187-010-9307-2

[2] Aghion, P., & Howitt, P. (1992). A model of growth through creative destruction. *Econometrica, 60*(2), 323–351. https://doi.org/10.2307/2951599

[3] Audretsch, D. B., Keilbach, M., & Lehmann, E. E. (2006). Entrepreneurship and economic growth. *Oxford University Press*.

[4] Baumol, W. J. (1990). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Political Economy, 98*(5), 893–921. https://doi.org/10.1086/261712

[5] Bosma, N., & Levie, J. (2010). *Global Entrepreneurship Monitor: 2009 Executive Report*. Global Entrepreneurship Research Association.

[6] Foster, L., Haltiwanger, J., & Krizan, C. J. (2001). Aggregate productivity growth: Lessons from microeconomic evidence. In C. R. Hulten, E. R. Dean, & M. J. Harper (Eds.), *New developments in productivity analysis* (pp. 303–372). University of Chicago Press.

[7] Hall, R. E., & Jones, C. I. (1999). Why do some countries produce so much more output per worker than others? *Quarterly Journal of Economics, 114*(1), 83–116. https://doi.org/10.1162/003355399555954

[8] Hopenhayn, H. A. (1992). Entry, exit, and firm dynamics in long run equilibrium. *Econometrica, 60*(5), 1127–1150. https://doi.org/10.2307/2951541

[9] Lucas, R. E. (1978). On the size distribution of business firms. *Bell Journal of Economics, 9*(2), 508–523. https://doi.org/10.2307/3003596

[10] North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.

[11] Porter, M. E. (1990). *The competitive advantage of nations*. Free Press.

[12] Schumpeter, J. A. (1934). *The theory of economic development*. Harvard University Press.

[13] Solow, R. M. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics, 70*(1), 65–94. https://doi.org/10.2307/1884513

[14] Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics, 13*(1), 27–55. https://doi.org/10.1023/A:1008063200484

[15] World Bank. (2023). *World development indicators*. World Bank Publications.