



ENTREPRENEURIAL ECOSYSTEM AND ENTREPRENEURIAL GROWTH: A SCIENTOMETRIC ANALYSIS

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Abstract

The purpose of this study was to fill a knowledge gap regarding the relationship between these two business variables by investigating the entrepreneurial ecosystem and entrepreneurial growth. To properly understand the dynamic relationship between the entrepreneurial ecosystem and entrepreneurial growth, this study adopted qualitative research designed, with reliance on secondary data. The data used for the research were obtained from juried journals deposited in sciencedirect, ProQuest and google scholar using the keywords of the study to extract and mined the essential articles used for the study. These findings highlight the need to improve access to finance in the form of access to loans from financial institutions, government financial credits and ease of access to venture capitalists. It also emphasise the need for infrastructural development, formulation and implementation of favourable policy for entrepreneurial growth as well as training and financial support for SME to ensure high growing firms.

Keywords: Entrepreneurial ecosystem, Entrepreneurial Growth, Finance, Policies, Supports.

1.1 Introduction

Entrepreneurial ecosystems have been widely studied in recent years as one of the most appealing topics for industrial practitioners, government policymakers, and academic scholars (Spigel, 2017; Roundy, *et al*, 2017; Autio, *et al*, 2018). Numerous studies have investigated the nature, networks, and dynamics of entrepreneurial ecosystems to improve understanding on how to support the entrepreneurship growth (Mack & Mayer, 2016; Roundy, *et al*, 2018; Chen, 2019).

Isenberg (2011) discussed an integrative model with six different domains and consists of functional attributes, social and physical conditions of human interaction, and crucial elements such as networks of entrepreneurs, leadership, talent, knowledge, and support services of entrepreneurial ecosystems. Spigel (2017) believed that the entrepreneurial ecosystem's boundary should be beyond a firm but within a region. In other words, to study an entrepreneurial ecosystem's performance, one needs to determine the proper unit of analysis as an entrepreneurial ecosystem. Should it be at a country, state, or city level?

An entrepreneurial ecosystems or entrepreneurship ecosystems are peculiar systems of interdependent actors and relations directly or indirectly supporting the creation and growth of new ventures. The entrepreneurial ecosystem cannot be separated or overlooked when the growth of business enterprises is involved. It is an interconnected framework that needs to function properly as a whole and





at all levels (Isenberg, 2011).

Entrepreneurs have an important role to play in any economy, but they cannot succeed if they are out of synch with the entrepreneurial ecosystem that surrounds them. Most of the time, entrepreneurs are not aware of the important elements of the ecosystem and cannot connect their enterprise with the flow of business for higher growth. Entrepreneurial ecosystems are a strategy that is designed to nurture economic development by promoting entrepreneurship growth, and innovation.

1.2 Statement of the Problem

Despite sub-Saharan Africa nations being rich in culture and diversity, many startups still end up struggling and many more closing down within their early years. Akingbolu (2014) adduces that about 70% of entrepreneurial businesses close within their first three years.

Several studies have adduced the poor performance and ultimate failure of many SMEs to some of the ecosystem components (Ofobruku, & Ezeah, 2019, Agbaeze, 2021). The 2023 Survey findings of SMEDAN demonstrate poor access to finance, weak infrastructure, inconsistency in government policies, access to market, multiple taxation, obsolete technology amongst other factors pose major hindrances to small and medium entrepreneurial growth (SMEDAN, 2023, Akawu, *et al* 2019). Few studies have attempted to determine the impact of these factors on sub-Sahara nations. This study is established based on this framework to further add to the body of literature with regards to the selected ecosystem components. This study therefore builds ecosystem determinant factors adduced to play huge roles in SME growth. These include the role of finance, infrastructure, support and policy in SME growth.

1.3 Objectives of the study

The general objective of this study is to investigate the influence of entrepreneurial ecosystems on entrepreneurial growth. The specific objectives are as follows.

- 1. To investigate the relationship between ease of access to finance on the growth of entrepreneurial growth
- 2. To identify the relationship of infrastructure with entrepreneurial growth
- 3. To determine if government policies is an aspect that can be overlooked when it comes to entrepreneurial growth.
- **4.** To ascertain if professional support from the government, mentors and friends is necessary for entrepreneurial growt

2. Methodology

This study adopted qualitative research designed, with reliance on secondary data. The data used for the research were obtained from juried journals deposited in sciencedirect, ProQuest and google scholar using the keywords of the study to extract and mined the essential articles used for the study (Abomeh, 2012; Omoankhanlen, et al 2018; Osunbor, & Ofobruku, 2023). The crucial asset of this research investigation is its data triangulation from the aforesaid reliable academic platforms. When a research investigation employed the same method for data collection from different platforms, over different time, data triangulation could be labelled as (Yuan, et al 2022; Abomeh, & Agbonifo, 2021). The scient metric analysis of data affixed on entrepreneurial ecosystem was assessed using four components enshrine in scholarly literature (ease of access to finance, infrastructure, policy and supports). Several





pertinent juried research studies were netted through forward and backward citations search of the identified research articles.

3.1 Conceptual Review

The concept of entrepreneurial ecosystem is clarified in this section

3.2 Entrepreneurial Ecosystems

Drawing on studies of scholars like Ofobruku, *et al* (2016), Ofobruku and Ezeah, (2019) these management researchers stated that entrepreneurship cannot exist without entrepreneurial opportunities, Stam and van de Ven (2021) report that the entrepreneurial ecosystem is composed of two separate words: entrepreneurial and ecosystem

The component of entrepreneurial ecosystem describes the interaction of investors with their environment for profit making, in the process of their actions to make profit, they create wealth. The studies of Purbasari, et al (2020), Ofobruku, et al (2019), Agbaeze, et al, (2021) comprehensively describe the ecosystem concept as "the natural environment and its elements, including living organisms in an area as well as the physical environment, which function together as a single unit". In terms of applying phenomenon to business research, an entrepreneurial ecosystem includes the surroundings, entrepreneurs and their businesses as the living organisms. This view explains the complex relations and inter-dependencies which shape entrepreneurial ecosystems (Brown & Mason, 2017).

The entrepreneurial ecosystem represents a form of social interaction that occurs continually. It also represents an understanding of a combination of elements that are crucial for entrepreneurship (Mason & Brown, 2014; Mba, *et al*, 2018; Jones & Ratten, 2021).

Table 2.1: Definitions of Entrepreneurial Ecosystems

Author(s)	Definition
Spilling (1996)	"Entrepreneurial ecosystems are the complexity and diversity of actors, roles and environmental factors that interact to determine the entrepreneurial performance of a region or locality".
Cohen (2006)	"An interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures".
Stam and Spigel (2016)	Entrepreneurial ecosystem as "a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory".
Spigel (2017)	"Entrepreneurial ecosystems are combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative start-ups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures".
Mujahid, Mubarik and Naghavi (2019)	An entrepreneurial ecosystem is defined by researchers as a collection of organised and interdependent factors that lead to the formation of a stimulating environment for entrepreneurial activities in a country.





(2021)	"The concept of an entrepreneurial ecosystem implies some form of social interaction that occurs continually". "Entrepreneurial ecosystems represent a way to understand the combination of elements required for entrepreneurship to exist in a designated space".
Stam and van de Ven (2021)	"Entrepreneurial ecosystems are systems that produce successful entrepreneurship, and where there is a lot of successful entrepreneurships, there is apparently a good entrepreneurial ecosystem"
1	Entrepreneurial ecosystem as the social and economic environment affecting local or regional entrepreneurship"

Isenberg (2010) and Feld (2012) are the pioneers of the entrepreneurial ecosystems approach. They suggested to policymakers that culture and community play a significant role in determining the success of entrepreneurship at any place (Cavallo, *et al*, 2018; Spigel, 2017; Stam & Spigel, 2016). There are a ton of studies that can be found which have all tried to properly discern and understand the concept of entrepreneurial ecosystems.

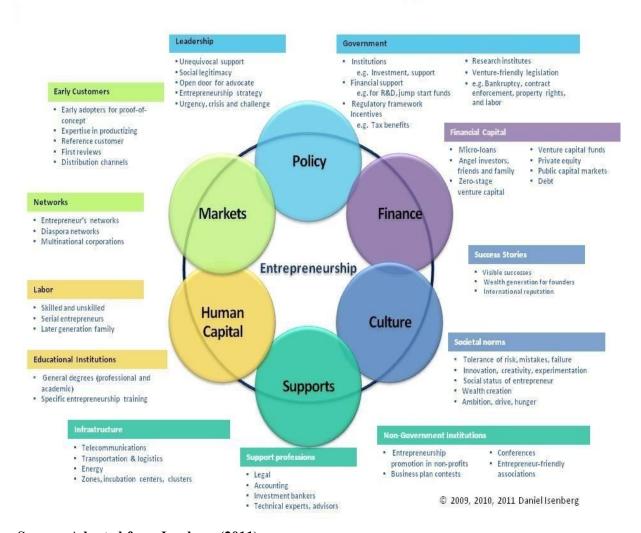
Isenberg (2010) argued that there is no exact combination of factors to create a successful entrepreneurial ecosystem, but policy makers should focus on understanding the local conditions and their value in gradually creating an entrepreneurial ecosystem. Isenberg (2011) suggested a process that works from the bottom to the top for devising entrepreneurial ecosystem and propose the model of entrepreneurial ecosystem.

These six domains of Isenberg's model are not only very general in nature but there are also factors used to measure the effect of each domain. These domains are interdependent with each other but also react in hundreds of ways which can lead to complex interactions. His emphasis on the value of context, and the argument that each entrepreneurial ecosystem emerges and matures in a unique balance of conditions is a significant contribution to this approach.

Figure 2.1: Isenberg's model of an Entrepreneurship Ecosystem







Source: Adopted from Isenberg (2011).

Another model developed to measure entrepreneurial ecosystems was proposed by Feld (2012). Feld's work shows that nine factors play an important role in the success of an entrepreneurial ecosystem. The emphasis on access to resources and the supportive role of the government and context, besides the interaction of entrepreneurs and the entrepreneurial ecosystem, are the central points of this Feld model. The ideas of Isenberg (2011) and Feld (2012) were adopted by the World Economic Forum (WEF). These groups developed models with lists of indicators to measure entrepreneurial ecosystems. A wave of research followed this approach to examine the characteristics of entrepreneurial ecosystems and their effect on entrepreneurial activity (Acs, *et al* 2014; Auerswald, 2015; Stam & Bosma, 2015; Mack & Mayer, 2016; Stam & Spigel, 2016; Alvedalen & Boschma, 2017; Audretsch & Belitski, 2017; Qian, 2017; Spigel, 2017).





Table 2.1.: Attributes of successful start-up communities

Attribute	Description
Leadership	Strong group of entrepreneurs who are visible, accessible and committed to the region being a great place to start and grow a company
Intermediaries	Many well-respected mentors and advisors giving back across all stages, sectors, demographics and geographies as well as a solid presence of effective, visible, well-integrated accelerators and incubators
Network density	Deep, well-connected community of start-ups and entrepreneurs along with engaged and visible investors, advisors, mentors and supporters. Optimally, these people and organizations cut across sectors, demographics and culture engagement. Everyone must be willing to give back to his community
Government	Strong government support for and understanding of start-ups to economic growth. Additionally, supportive policies should be in place covering economic development, tax and investment vehicles
Talent	Broad, deep talent pool for all levels of employees in all sectors and areas of expertise. Universities are an excellent resource for start-up talent and should be well connected to community
Support services	Professional services (legal, accounting, real estate, insurance and consulting) are integrated, accessible, effective and appropriately priced
Engagement	Large number of events for entrepreneurs and community to connect, with highly visible and authentic participants (e.g. meet-ups, pitch days, start-up weekends, boot camps, hackathons and competitions)
Companies	Large companies that are the anchor of a city should create specific departments and programmes to encourage cooperation with high-growth start-ups
Capital	Strong, dense and supportive community of venture capitalists, angels, seed investors and other forms of financing should be available, visible and accessible across sectors, demographics and geography

Source: Adopted from Feld (2024)

3.3 Components of the Entrepreneurial Ecosystem

3.3.1. Policies





A policy is the set of ideas or plans that has been commonly agreed to apply by the group of people, institutions, or by the government. Despite the dynamism and success of entrepreneurs depending on their traits, skills, and capabilities, their activities are affected by the policy of the government in one way or the other (Akinyemi & Adejumo, 2018). The prevailing tax and tariff policy, monetary and fiscal policy have direct impact on the activities of an enterprise. Economic growth is always a major priority of most governments because it increases the employment opportunity and spending capacity of its people. Economic growth can only be achieved through the growth and development of entrepreneurship in the country. Favorable government policies towards business, taxation, legislation, education etc. will help foster entrepreneurship in the country. Ribeiro-Soriano, & Galindo-Martín, (2012) have said "Good governance is a necessary prerequisite to support and to stimulate entrepreneurship activity that would have positive effects on economic growth."

Similarly, Kshetri, and Dholakia, (2011) said "Different theoretical contributions and various empirical studies have led to the accepted view that the government can attack barriers to entrepreneurship related to skills, information, market, and infrastructures by legal and non-legal influences". The government has the authority or power to implement either general or specific kinds of policies to support entrepreneurship in its country. General policies encompass policies affecting all the industries and commerce such as tax policy, labour law, and market policy etc. which maintain the proper entrepreneurial environment. Specific policies are the policies developed by a particular institution for a specific organization for specific purposes (Akinyemi, & Adejumo, 2018). "Entrepreneurship is one instrument that policy makers can use to promote economic growth" (Ribeiro-Soriano, & Galindo-Martín, 2012). Change and upgradation in economic development policies helps build entrepreneurship and enterprises which eventually help in developing economies of the country (Carland, & Carland, 2004).

Based on this perspective, the specific governmental policies that can have direct or indirect effects on businesses include taxation, subsidies, interest rates and exchange rates. The government taxation policy has been widely recognized as one factor that can affect the performance of every business. For instance, the imposition of high taxes on specific imported products will ultimately encourage local businesses to produce more of such goods. But if the taxation on raw materials required for local production is high, then the local entrepreneurs may be discouraged to continue production (Okojie, 2013).

3.3.2 Finance

Finance is a major factor or key when the initiation and growth of entrepreneurship is concerned. Opportunities can only be properly utilised, and ideas can only be carried out properly when there are sufficient funds to access. Kozmetsky *et al* (1985) suggested multiple stages of financing by venture capital for entrepreneurship i.e., Seed Financing, Start-up Financing, and First, Second, Third and Fourth stage financing.

Seed financing is to prove the concept, Start-up financing is to develop the product and initial marketing and remaining other stages of financing are for commercialization of the project, managing working capital, expansion of the project and eventually investing in the companies going public soon.





"The role of finance is very important in the development of entrepreneurship and Micro, Small and Medium Scale Enterprises (MSMEs)" (Somoye, 2013).

There are other factors that should be considered for the development and growth of entrepreneurship in a particular country. Access to capital or finance is necessary but not sufficient for successful entrepreneurial development, (Onakoya, *et al* 013).

Furthermore, large firms are well connected to administrative and political institutions and support any reform in the financial system that increases the fixed cost for firms and negatively affects the small firms' access to external finance. The large firms are even against the reforms ensuring equal access to finance for all firms, because such reforms will diminish their competitive advantage over the small firms. The better access to finance improves the market since firms can compete on an equal footing (Haber, *et al*, 2003).

3.3.3 Supports

Chowdhury, et al, (2018) suggests the support of institutions is quite important for fostering entrepreneurship in the country. Empirical evidence from their research paper has suggested the changes in the quality of institutions have a higher impact on entrepreneurial quality and quantity in developing countries. Here the term "support" encompasses conferences, infrastructures, business associations, business development centers, experts, etc.

Many scholars have studied the role of support systems in fostering entrepreneurship. The higher the support, higher will be the growth and development of entrepreneurship. Jansen and Weber, (2009) stated the success of entrepreneurship whether it is coming up with innovation or survival or growth of the enterprise is dependent on what kind of support systems received.

Aidis, et al (2008) suggested that poor institutional support has contributed less growth of entrepreneurship, especially in the socialist countries. Kshetri, & Dholakia, (2011) indicated that entrepreneurship in developing countries is facing different environments and institutional mechanisms which are remarkably contrasting to developed countries. It means there is less support and conducive environment to entrepreneurship in emerging economies.

The Universities of a nation or geographical location also has a crucial role that should not be overlooked in enhancing entrepreneurial education to encourage the students to become self-employed once they graduate from university. Therefore, the purpose of higher education institutions is not only to produce graduates to become job seekers, but also job creators. (Sahban, et *al* 2016) While advocating to upgrade technological base for micro and small enterprises, Mutai, (2011) stated that access to finance, proper regulatory framework, infrastructural services, all basic utilities facilities will foster the micro and small enterprise sector and thus help realize sustainable economic growth.

More recently, studies have reported that the quality of infrastructure not only affects the overall economic performance of the country but also firm performance. The positive effects of access to means of transportation on trade and income generation are comparatively more significant for developing countries (Atkin and Donaldson, 2012; Sequeira, 2013).

Fjosal *et al*, (2010) found electricity to be the most significant obstacle in doing business, with more than 50% of businesses reporting it to be the most significant problem in Sub-Saharan Africa. In a further study of African countries, Escribano, *et al* (2010) also found that among infrastructure elements, electricity supply has a strong and statistically significant, negative, impact on firm performance.





The contribution of electricity to average productivity of Zambia and Eritrea was found to be 68% and 49% respectively. Similarly, Moyo (2012) has found that power outages have negatively affected the productivity of Nigerian firms. It has been estimated that a 10% increase in hours of power outage is expected to reduce the productivity of all firms (small, medium and large) by 3.2%. Further analysis in this study compared small firms with large firms and found that a 10% increase in power outages duration (hours) is expected to reduce the productivity of small firms by 4%, whereas the effect is insignificant for large firms, probably due to their own power generation arrangements. The study by Escribano *et al.*, (2010) on 26 counties in the African region used the Business Climate Survey database for the period of 1999-2005 and found that infrastructure problems including electricity and transportation are relatively important for firms in low-income countries.

3.4 The Concept of Entrepreneurial Growth

Entrepreneurship implies the analysis, use of new ideas or recipes for reconfiguring objects in the material and social world which can be harnessed to enhance a nation's wealth. In the long run, a country's economic progress depends on her ability to increase the value of what the nation produces with her resource base (people, land, and capital). Individual entrepreneurs and teams or entrepreneurial groups invest their resources in the manufacturing, technological and trading opportunities that make economic development possible. Indeed, whenever entrepreneurs are the first to discover the availability and potential economic value of new resources, they are in effect bringing those resources into existence in economic terms (Baba, 2013; Ofobruku & Ezeah, 2019).

The need for entrepreneurial growth in the country today is necessitated by the fact that entrepreneurial growth is a major factor for economic growth and the permanent cure for extreme hunger and poverty necessitated by unemployment. The definition emphasizes the process value of entrepreneurship and describes entrepreneurial opportunities in a broader sense.

Therefore, this study defines an entrepreneur as an individual or group of individuals who see opportunities, grab opportunities and grow a business out of it after considering the risk involved and benefits to be derived. While entrepreneurship can be seen as the process of identifying an opportunity related to needs- satisfaction and converting it to a thing (product, service) of value. It can also be abstract to infer the procedure, and actions embark on by entrepreneurs focused on catching value connected with business opportunities. It can be seen as a process driven by the desire to innovate; that is producing new things (products, services and improving processes).

4., Discussion of Findings

The findings from this investigation revealed the nature of relationship that existed between Entrepreneurial ecosystem and Entrepreneurial Growth. The Entrepreneurial ecosystem was assessed using four components (ease of access to finance, infrastructure, policy and support). Regarding ease of access to finance the summary of literature reviewed demonstrated that there was generally poor access to finance in sub-sahara Africa. This was as indicated by the low mean values of the finance variables from several scholarly publications. The entrepreneurs opined that access to finance was good only in relation to family and friends but poor in terms of access to loans venture capital and government





financial credit. These findings aligned with the study of previous management scholars (Owenvbugie and Igbinedion, 2015: Ibrahim and Ndidi, 2020) which demonstrated a lack in access to finance with consequent negative effect of entrepreneurial growth.

With regards to infrastructure the literature reviewed measured infrastructures using power supply, road condition, cost of transport and telecommunication standard. Textual analysis of the literature revealed and indicated poor power supply, poor cost of transportation and bad condition of the roads. They, however, perceived the telecommunication standard to be good. Conversely poor infrastructure as seen in this study would also slow growth of entrepreneurial businesses. The negative effect of poor infrastructure on entrepreneurial growth is also spelt out in research of Abur (2020) and Abdullahi et al (2020).

The dimension of government policy, the literature reviewed, showed that some of the policies were regarded as unfavourable. Policies regarding finance, taxation, foreign product importation and policy on incentives were seen as unfavourable to the SMEs. The findings of this investigation are aligned with the study carried out by Alabi, *et al* (2019) that showed that government policy influenced growth of entrepreneurs.

Findings on Support for the entrepreneurial the literature reviewed revealed that the entrepreneurs, had business mentors available while institutional training programs, subsidy support and support for technology where unavailable. However, some scholars in the literature confirm government support programmes to entrepreneurial businesses growth (Akawu, *et al* 2018). This may probably be explained by population and individual differences as well as sector differences which were not accounted for in this study.

4. Conclusion

This study adds to the body of knowledge regarding entrepreneurial ecosystems. Critical review of the existing body of literature lends credence to the fact that theoretical and empirical studies relating to the ecosystem and its effects on Entrepreneurial Growth is largely deficient.

Literature provided by this study demonstrated entrepreneurial constraint (ease to financial). The primary findings from this systematic literature review supported the findings of previous studies regarding access to finance, infrastructure, policy and entrepreneurial support. The primary findings indicate that most of Entrepreneurs easily access finance from family and friends but have difficulty in obtaining loans, inadequate access to venture capitalists and government financial credits.

Infrastructural set-up to aid business is largely deficient. Inadequate power supply, road conditions and high road transport pose daunting challenges to the growth of Entrepreneurial. Policy is also not left out as financial policies, taxation policies, policies on importation of goods and government policy of incentives have not favoured the SMEs in any way. The entrepreneurs grossly lack support.

While it seems a certain level of business mentorship is available, a greater proportion of entrepreneurs suffer the effects of deficiency in business training programs, support for subsidy and technology provision. This study concludes that finance, infrastructure, policy and support significantly affect the growth of entrepreneurial business.

5. Recommendations

Based on the findings of data from this survey; It is recommended that:

The establishment of government financial credit institutions should be considered and set up with





follow up mechanisms aimed at profitable utilization of credit facilities by entrepreneurs. This would bridge the unmet need for financing as well as ensure that credits are properly utilized for maximal profits

The government–should ensure the creation of financial hubs and platforms aimed at engendering financial assistance to entrepreneurial businesses. These platforms would serve as veritable meeting points between sole proprietors and potential investors including venture capitalists. More so, the government can play a mediational role in this relationship, ensuring a win-win approach within the construction of government, entrepreneurs and investors leading to growth of entrepreneurial businesses. Government and other non-governmental institutions could consider the set-up of research organizations aimed at monitoring the evolving entrepreneurial ecosystem. This should be done with a view to making handy data available for policy makers, potential investors and the general body of entrepreneurship in terms of necessary investment and decision making in terms of both finance and mentorship.

Appropriate budgetary allocation with follow-up mechanisms for infrastructural development should be ensured in the state. The government should invest heavily in opening good road networks which would bring about a reduction in transport costs. Power supply should also be seen as a capital development project for the SMEs in the State.

Policy for incentives aimed at different levels of SMEs in the state should be promulgated. Adequate incentives for credits, raw materials and factors of production should be considered and developed. This would ensure high growth of firms within the state. Government policy on taxation should be made favourable to SMEs. Unfavourable policies such as multiple taxation policy should be avoided as this will not help the entrepreneurial terrain.

Government policy on aiding patronage of locally made goods should be considered. This includes policy for incentives on quality of locally made goods, reduction in taxes of those goods and increase in tax and payments on foreign goods. Government training programmes aimed at new technologies, product innovation, product quality and leveraging entrepreneurial opportunities should be instituted to help the SMEs in Edo State.

5.2 Suggestion for Further Research

Future research on the entrepreneurial ecosystem in sub-shara nations should consider the impact of the ecosystem in a sectorial approach.

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