FINANCIAL INCENTIVES FOR YOUNG INNOVATIVE ENTERPRISES IN A DEVELOPING COUNTRY: THE CASE OF AZERBAIJAN

by

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ABSTRACT

In today's swiftly evolving economic environment, it cannot be overstated how crucial it is to offer financial incentives to youthful, innovative businesses. These incentives can not only cultivate an innovative culture, but also contribute to the creation of jobs, the enhancement of the economy's competitive advantage, and the promotion of sustainable growth. With the rise of digital transformation and disruptive technologies, it is more important than ever to support new innovative businesses through financial incentives. Through tax incentives, grants, and subsidies, governments can encourage the entrepreneurial spirit, risk-taking, and creativity that are essential for economic and social progress. In essence, these financial incentives serve as a catalyst for the transformation of creative ideas into viable businesses, fostering a robust startup ecosystem and bolstering economic diversity and resilience.

In this study, innovative incentives for young enterprises were investigated on the example of Azerbaijan. In the first chapter, the theoretical and methodological foundations of incentives were studied. In the second chapter, innovations in developing and developed countries were compared. In the third chapter, the current situation, and future prospects of innovation in Azerbaijan are studied.

As a result of the research, it was determined that spending money on education and capacity building is crucial to developing a knowledgeable and flexible workforce that can spur innovation among SMEs. Azerbaijan can provide its people the information and abilities required to thrive in the innovation-driven economy by boosting STEM education, entrepreneurial training, and lifelong learning opportunities.

Keywords: incentives; innovative enterpreneurship; SME.

REFERAT

Günümüzdəki sürətli şəkildə inkişaf etməkdə olan bir iqtisadi mühitdə gənc və həmçinin innovativ sahibkarlara maliyyə stimulları təklifinin nə dərəcədə əhəmiyyətli olduğundan xəbərdarıq. Bu stimullar innovativ mədəniyyəti inkişaf etdirməklə yanaşı, həm də yeni iş yerlərinin yaradılmasına, iqtisadiyyatın rəqabət üstünlüyünün artırılmasına və həmçinin davamlı inkişafın təşviqinə töhfə verir. Rəqəmsal transformasiya və texnoloji inqilab ilə yeni innovativ biznesləri maliyyə stimulları vasitəsilə dəstəkləmək məsələsini daha çox aktuallaşdırır. Vergi güzəştləri, qrantlar və subsidiyalar vasitəsilə hökumətlər iqtisadi və sosial tərəqqi üçün vacib olan sahibkarlıq ruhunu, risk götürməyi və kreativliyi təşviq edə bilərlər. Əslində, bu maliyyə stimulları kreativ ideyaların həyat qabiliyyətli biznesə çevrilməsi, güclü startap ekosistemini təşviq etmək və iqtisadi müxtəlifliyi və dayanıqlığı gücləndirmək üçün katalizator rolunu oynayır.

Bu araşdırmada Azərbaycanın timsalında gənc müəssisələr üçün innovativ stimullar araşdırılmışdır. Birinci fəsildə həvəsləndirmələrin nəzəri və metodoloji əsasları araşdırılmışdır. İkinci fəsildə inkişaf etməkdə olan və inkişaf etmiş ölkələrdəki innovasiyalar təcrübələri müqayisəli formada tədqiq edilmişdir. Üçüncü fəsildə Azərbaycanda sahibkarlıqda innovasiyanın mövcud vəziyyəti və gələcək perspektivləri öyrənilir.

Tədqiqat nəticəsində müəyyən edilib ki, təhsilə və potensialın artırılmasına pul xərcləmək KOM-lar arasında innovasiyaya təkan verə biləcək bilikli və çevik işçi qüvvəsinin inkişafı üçün çox vacibdir. Azərbaycan STEM təhsilini, sahibkarlıq təlimini və ömürboyu öyrənmə imkanlarını artırmaqla öz insanlarını innovasiyaya əsaslanan iqtisadiyyatda inkişaf etmək üçün tələb olunan məlumat və bacarıqlarla təmin edə bilər.

Açar sözlər: stimullar; innovativ sahibkarlıq; KOM.

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INTRODUCTION

Relevance of the topic: The topic of financial incentives for young innovative enterprises in developing countries, with a focus on Azerbaijan, is highly relevant as it aligns with global efforts to stimulate economic growth, reduce unemployment, and encourage innovation. Financial incentives are crucial for startups as they often struggle with limited access to capital, which hinders their ability to innovate and grow. In Azerbaijan, a country striving to diversify its oil-dependent economy, promoting entrepreneurship can spur economic development and job creation. Given Azerbaijan's strong desire to cultivate a knowledge-based economy, understanding how financial incentives can boost young innovative enterprises is important. The outcomes could inform policy-making and enhance the effectiveness of existing incentive schemes. Furthermore, this topic could contribute valuable insights to the broader discourse on supporting entrepreneurship in developing economies, providing a case study that could guide initiatives in similar contexts. Finally, given the youth bulge in Azerbaijan, fostering young innovative enterprises could play a significant role in harnessing the demographic dividend for sustainable economic growth.

Purpose of the study: The main goal of the research is to investigate the incentives of young innovative enterprises in the example of Azerbaijan.

Research questions: The main question of the thesis research is will the improvement of financial instruments create the necessary incentives for the innovative activities of the enterprises?

Contribution: The survey conducted in the study, as well as the comparative analysis of the experiences of different countries, can be considered a contribution in this direction.

Thesis outline/limitations: The main limitation is that there are few practical studies in this direction in the local language and by local authors.

I CHAPTER. LITERATURE REVIEW

1.1. Development and classification of incentives for entrepreneurship

Entrepreneurship is essential for economic progress and development. It involves the establishment of new enterprises, products, and services, which can contribute to employment creation, innovation, and enhanced productivity. However, starting and expanding a business can be difficult, especially for those without the required resources and support. Governments, non-profit organizations, and private sector organizations have instituted a variety of entrepreneurship development incentives to encourage more people to become entrepreneurs and foster a flourishing entrepreneurial ecosystem (5).

Local and state authorities have spent decades trying to lure businesses away from other regions by providing generous and diverse tax subsidies. The effectiveness of this strategy has been frequently disputed. Entrepreneurship and innovation frequently occur at much fewer points of aggregation, whereas economic development policy usually aims to attract large corporations to a region. This makes the investigation of the relationship between entrepreneurship and development incentives very compelling. The majority of economic development incentives are designed to attract large, established firms; states and localities offering these incentives lack the time and resources to evaluate minor initiatives and determine which should receive funding. As a consequence, these kinds of incentives are often given to big businesses and initiatives, as the grantors of the incentives are able to justify the expense by stating that the project created a significant number of jobs or produced other tangible results. In addition, larger companies are more likely to obtain these subsidies due to their higher financial and political capital (29).

1.1.1. Development of incentives for entrepreneurship

Our primary focus is the research conducted on the effects of economic development incentives offered at the state and local levels. The second discusses the

relationship between financial independence and self-started businesses. On the precise impact that development incentives have had on entrepreneurial activity, few studies have been conducted. This will be the primary focus of our statistical investigation.

Table 1.1.1: Authors' approaches to incentives.

Authors and sources	Opinion
Mitchell M. et al. (Mitchell M. et al. 2018)	Authors provided the two most recent evaluations of the published research on incentives. The former contains a single instance of "entrepreneur" (along with any related synonyms, including "entrepreneurial" and "entrepreneurship"). There are only three in the second option. The primary focus of the literature on development incentives, on the other hand, is the effect of incentives on macroeconomic variables such as economic growth and job creation
Lee Y. (Lee Y. 2008)	Lee investigated the influence of state laws on the location and relocation decisions of businesses. It was determined that there was little correlation between the relocation of industrial facilities and the nine various state incentive programs (which consisted primarily of tax rebates). Lee's investigation revealed that incentive programs did not appear to be particularly effective.
Bruce D. and Deskins J. (Bruce D. and Deskins J. 2012)	Bruce and Deskins (2012) examine the relationship between state tax policy and four indicators of entrepreneurial activity in their study. These indicators consist of the percentage of federal individual income tax returns filed with a Schedule C (a proxy for small business income earners), the national share of such tax returns (state total divided by national total), the sole proprietorship share of state employment, and the national share of sole proprietors. Many of its variables are broad policy measures, such as the maximum individual or corporate income tax rates that can be applied. In addition to a count of non-tax incentive programs, they include a tally of tax incentive programs. They conclude that tax benefits have a statistically significant, albeit weak, positive correlation with the four entrepreneurial variables they examine. The relationship between non-tax incentives and their respective measures of sole proprietorship is negative, albeit weak. This association is supported by statistical evidence. In neither case is the magnitude of the economic impact significant

Source: the table has been compiled according to the first column by the author.

As opposed to research on the effects of development incentives on entrepreneurial activity, the majority of studies on the effects of development incentives on state and local economies have focused on the link between the incentives and larger economic outcomes.

Due to the limited availability of cross-state data on development incentives, the majority of published research on this topic focuses either on specific categories of development incentives within the context of cross-state research or on the impact of larger bundles of development incentives within a particular region. This is because cross-state data on development incentives are unavailable. Bremmer and Kesselring (1993) investigate the impact of job creation tax credits and job training programs on state employment rates as an illustration of the former. There is no statistically significant correlation between tax credits and training programs, but there is a correlation (6).

In their 2018 study, Bundrick and Snyder looked examined Arkansas's Quick Action Closing Fund (QACF), which is a "deal-closing" fund similar to those found in the majority of states. With the use of county statistics, they were able to determine that there was no connection between the QACF subsidies given to businesses in these counties and two indications of the degree of economic activity. These indicators were the number of private business establishments and the level of private employment. There was no connection at all between QACF subsidies and employment levels, despite the fact that there was an inverse association between them and the number of enterprises in nearby counties. This illustrates how the incentives game is fundamentally a zero-sum competition (8).

It is conceivable that the incapacity to discover evidence of the effectiveness of economic development subsidies is a result of the belief that resources are limited. Consequently, any expenditure on subsidies necessitates a reduction in expenditure on other items, just as any targeted tax relief necessitates an increase in taxation on others. Furthermore, it is conceivable that the inability to discover evidence that economic development subsidies are effective is due to the belief that resources are limited. Two recent papers present evidence in support of the claim. According to Wang (2016), financial incentives tend to displace other forms of expenditure in subsequent years. In addition, Dove and Sutter (2018) discovered a negative correlation between incentive spending and "economic freedom." The concept of

"economic freedom" incorporates expenditure, taxation, and labor market constraints (34).

Although it is not yet known if economic development incentives have an influence on the creation of jobs or other economic results, it has been shown time and time again that entrepreneurialism and innovation have a favorable impact on the economies of state and local governments. However, research conducted by Glaeser and colleagues (2010) found that various local economic situations "spawn different levels of entrepreneurship." They differentiate between factors of entrepreneurial activity on the supply side and the demand side. This research investigates the connection between the availability of incentives and the number of opportunities for entrepreneurial engagement (14).

1.1.2. Classification of incentives for entrepreneurship

This paragraph will examine the most common incentives for entrepreneurs and their benefits. Financial rewards are frequently the primary motivation for many entrepreneurs. In addition to prospective profits, this also includes the possibility of selling their business for a substantial amount. The prospect of economic autonomy and the ability to determine one's own financial fate can be quite empowering and motivating (Shane S. 2009).

Let’s explore the primary incentives for entrepreneurship.

Scheme 1.1.1: The primary incentives for entrepreneurship.

Source: the scheme has been compiled by the author according to "[9, 11, 4, 33]".

1) Tax Benefits.

One of the most prevalent forms of entrepreneurial incentives is tax incentives. Governments around the world provide a variety of tax breaks and exemptions to

encourage the formation and growth of businesses. In the United States, for example, entrepreneurs can deduct up to $5,000 in startup expenses and $5,000 in organizational expenses during their first year of operation. In addition, small businesses may qualify for a reduced corporate tax rate of 21%, which is lower than the standard rate of 28% (9).

Tax incentives can significantly reduce the financial burden of launching a business. Typically, entrepreneurs must invest a considerable amount of capital up front to cover start-up costs, such as equipment, supplies, and marketing. Governments can reduce these costs by providing tax exemptions and rebates, making it easier for entrepreneurs to initiate new businesses. In addition, lower corporate tax rates can increase the profitability of small businesses, allowing them to reinvest in their businesses and hire more employees (11).

2) Grants.

Common forms of entrepreneurship incentive include grants. Grants can be utilized by entrepreneurs to initiate or expand their businesses. Governments, non-profits, and private sector organizations offer a variety of grant programs, including foundation funding, research and development grants, and innovation grants (4).

Entrepreneurs who lack the capital required to establish or expand their businesses can benefit greatly from grants. In contrast to loans, which must be repaid with interest, grants do not need to be repaid, easing the financial burden of entrepreneurs. In addition, many grant programs have eligibility requirements, such as membership in an underrepresented group, which can assist entrepreneurs who face systemic barriers to accessing capital to compete on an equal playing field (4).

3) Accelerators and incubators.

Incubators and accelerators are programs that provide entrepreneurs with the necessary resources and assistance to establish and grow their businesses. Incubators provide early-stage businesses with a variety of services, including office space, mentorship, and funding access. Accelerators, on the other hand, are designed to facilitate the rapid expansion of established businesses, typically through intensive mentoring and counseling programs.

Incubators and accelerators are especially advantageous for entrepreneurs who are just starting out or who lack the required business expertise. By providing access to resources and support, these programs can aid entrepreneurs in developing their business concepts, refining their strategies, and obtaining access to capital. Moreover, incubators and accelerators frequently have extensive networks of investors and industry experts, which can assist entrepreneurs in securing funding and establishing valuable connections (4).

4) Education and training in business.

Numerous organizations offer training and education programs that can assist entrepreneurs in acquiring the skills and knowledge necessary for business success. This may include marketing, financial management, and leadership programs.

Entrepreneurs who lack business experience or who are venturing into unfamiliar industries can benefit greatly from business education and training programs. These programs can assist entrepreneurs in acquiring the skills and knowledge essential to make informed decisions and expand their businesses by providing access to training and education (33).

5) Access to capital.

Access to capital is one of the greatest obstacles entrepreneurs confront, particularly those who are just starting out. Without sufficient capital, it can be difficult to cover startup costs, invest in development, and withstand economic downturns. To address this issue, numerous organizations provide access to capital programs, such as loans, venture capital, and crowdfunding.

Loans can be extremely beneficial for entrepreneurs with a solid business plan and a high credit score. They can provide the capital required to fund start-up costs, purchase inventory, and invest in growth. Venture capital, on the other hand, is typically reserved for high-growth businesses with the potential to generate substantial returns on investment. Crowdfunding, which entails soliciting small amounts of money from a large number of individuals, can be an effective method for businesses with a strong social media presence to raise capital (33).

6) Streamlined statutes.

One of the challenges of launching and operating a business is navigating convoluted regulations and paperwork. To address this issue, some governments have implemented simplified regulations and streamlined procedures for entrepreneurs. In a number of nations, for instance, business owners can register their companies online and efficiently complete the necessary paperwork. This can save entrepreneurs time and money, allowing them to concentrate on expanding their businesses rather than navigating bureaucracy (33).

7) Possibilities to expand professional network.

Entrepreneurship requires a robust contact network. By developing relationships with other business owners, investors, and industry experts, entrepreneurs can obtain valuable insights and connections. To facilitate networking, numerous organizations host events, conferences, and other occasions for entrepreneurs to interact with one another and potential investors (33).

Entrepreneurs who are just starting out or who lack a robust professional network can benefit greatly from professional networking opportunities. By attending events and establishing relationships with other entrepreneurs and industry professionals, they can facilitate access to funding, the establishment of new partnerships, and the acquisition of valuable industry insights.

1.2. The concept of financial incentives for young innovative companies

This paragraph examines the characteristics of youth innovative companies (YICs) that qualify them to receive grants from the government.

Young innovative companies (YICs) are receiving increased attention from business policies due to their capacity to reactivate and revitalize industry. Numerous studies demonstrate that YICs are crucial for transforming the industrial framework, propelling economic development, and disseminating innovation throughout a territory or region. Consequently, both the academic community and political parties are exhibiting a growing interest in YICs.

Since YICs are a comparatively novel concept, there is no consensus in the literature regarding their precise characteristics. Schneider and Veugelers (2010)

define YICs as tiny, youthful businesses with a high potential to develop innovations with commercial applications and create societal value (26).

Pellegrino, Piva, and Vivarelli (2009) define YICs as companies that have been in operation for less than eight years and have innovative products, processes, or initiatives in development over the past three years (20).

Governments must establish innovation policies that encourage new business initiatives. Small ventures confront the critical challenge of attracting investment (19).

According to Hall (2008), funding is one of the most significant obstacles to development and innovation (15).

Minniti (2008) notes that the relationship between public policy and entrepreneurship or business creation has not been thoroughly examined (23).

Even though the literature on public policy is extensive, very few studies focus on YICs, and almost none examine the relationship between these two factors. This study explicates the characteristics of YICs that benefit from public policies in the form of subsidies to help cover this knowledge vacuum (26).

In the context of business, "financial incentives for young innovative companies" refers to a collection of policies and activities meant to encourage the expansion and growth of startups and other types of entrepreneurial businesses. These incentives may come in a variety of packages, such as grants, tax refunds, access to funding, and possibilities for investment (31).

Grants from the government are one of the most common types of financial incentives provided to start-up businesses that are focused on innovation. The purpose of these grants is to aid startups and other early-stage enterprises in financing the costs of research and development, product testing, and other startup-related expenditures. Typically, these funds are granted to startups. Businesses that make investments in research and development (R&D) or educate new staff may be eligible for tax credits or exemptions. Other financial incentives may also be available.

Another crucial component of financial incentives for creative firms is access to various forms of capital and chances for investment. Startups and other

entrepreneurial enterprises who have difficulty securing the financing necessary to establish and expand their company may benefit from the assistance that may be provided through financial incentives, which can help bridge this funding gap. Businesses that are successful in luring investment from other parties or in procuring loans from financial institutions may be eligible for matching funds or other types of financial help from the governments of certain countries, for instance.

In general, financial incentives for young creative enterprises play an essential part in supporting the growth and development of new businesses, as well as in fostering innovation and entrepreneurship. This is because financial incentives are one of the most important factors in fostering growth and development. It is possible for governments and other organizations to make a contribution to the creation of job opportunities, economic growth, and technical innovation and progress if they provide financial support and other kinds of help to startups and other types of entrepreneurial initiatives.

1.3. Impact of financial incentives on entrepreneurial activity and growth

1.3.1. Business incubator as a crucial element of entrepreneurial activity and growth

According to empirical research (cite), public policies may contribute to economic development by fostering innovation and bolstering new entrepreneurial endeavors. Although the relationship between entrepreneurial spirit and economic growth is complex, the evidence suggests that public policies can contribute to economic expansion.

Incubators and technology centers, which are two of the most common instruments used by governments to foster entrepreneurship and innovation, particularly at the regional level, each have their own set of distinguishing characteristics (cite). As institutions, universities, which are responsible for the creation and transmission of knowledge through education and collaboration with businesses, are also included in this set of infrastructures.

The purpose of policies pertinent to entrepreneurship is to foster an environment that encourages and assists new business proprietors in overcoming the challenges they face in the early phases of their ventures. Therefore, the purpose of entrepreneurship policies should be to encourage, on both a social and an economic level, the establishment of productive entrepreneurial endeavors (10).

The provision of public infrastructure is one method governments use to encourage creative entrepreneurship and foster an inventive character in the private sector. These infrastructures serve as intermediaries, and their primary objective is to provide services designed to accelerate one or more phases of inventive activity in the domains of knowledge production and technology acquisition. Additionally, public infrastructures enable private companies to produce and sell the goods and services they offer. Due to the significant responsibilities that incubators, technology centers, and universities play in the dynamic three-way interaction between industry, government, and academic institutions, this research places special emphasis on these institutions (3).

The next section will detail the many ways in which these middlemen serve as vehicles of public policy to foster creative entrepreneurship.

To begin, business incubation programs for innovative companies are examples of local innovation support systems. The most cutting-edge incubators will provide a variety of services, including the following (12):

1) Incubators find business prospects that help entrepreneurs to develop their business efforts and give advisory services as well as information on markets, technology, innovation, funding, and legal processes;

2) Incubators also provide a safe environment for entrepreneurs to test their ideas;

3) Incubators prepare viability plans (to analyze the possibility of a new business venture and plan its growth) and train entrepreneurs skills related to the administration of businesses;

4) Incubators are beneficial because they assist new company initiatives in getting off the ground and provide direction for them throughout the early stages of their development;

5) Incubators provide the necessary infrastructure and facilities to inventive new businesses so that they may get temporary assistance;

6) Incubators grow companies to consolidate new enterprises (offering assistance) by establishing an environment that allows firms to expand, create employment, and compete on the local market. This is done by creating an environment that enables firms to expand, generate employment, and compete.

Extensive research conducted in the 1980s addresses the debate that took place at the time between academicians and politicians regarding various methods for boosting local economies (cite). Instead of focusing on attracting outside investment, regional governments may turn to endogenous development – the process of delving into the potential of their own local environment – to create employment and advance industry (cite). Incubators enable entrepreneurs to capitalize on this opportunity by providing them with the resources necessary to establish and grow businesses (13).

1.3.2. The technology center as a crucial element of entrepreneurial activity and growth

The technology center is the second entity that provides infrastructures to facilitate innovative entrepreneurs. As a means of enhancing entrepreneurial competitiveness, the purpose of technology centers is to promote and disseminate innovation and technological advancement. Technology centers are intermediary organizations with a substantial presence throughout Europe. These institutions (research and technology organizations) comprise a diverse range of entities that differ between nations. Origin, duration, size, objective, and target group vary by nation, preventing the identification of a standardized European technology center model. However, all technology centers share certain characteristics, such as a focus on industry and the provision of innovation-supporting services. These services aim

to address multiple issues. Short-term issues are immediate and relate to the launch of the company. Therefore, technology institutes provide services like testing laboratories. Short-term actions aid in controlling and ensuring the integrity of basic materials, products in development, and finished goods. Medium-term issues relate to the maintenance and enhancement of an organization's production processes. These processes include technological services ranging from product conception and design to production and organization. Long-term, technology centers provide services related to R&D initiatives (new production processes, methods, etc.) with the objective of expanding the enterprises within the technology center, among other things (30).

Firms with ties to technology centers experience greater growth than those without. The university is the third form of institution that provides infrastructure to foster innovative entrepreneurship. Universities are an essential link between commerce and expansion. Regionally, universities are responsible for knowledge creation, dissemination, and the education of aspiring entrepreneurs. Thus, the technological profile and responsiveness of universities can impact innovative business initiatives. Specifically, university-affiliated incubators deal with the most innovative companies, which typically have the greatest growth potential. However, not all universities have an entrepreneurial culture or a favorable business environment. In addition to technology and facilities, one of the most significant contributions universities make to entrepreneurial activity is talent (i.e., individuals). Access to knowledge-based assets, which can assist innovative businesses, is a benefit for companies with university connections. However, some trade-off risks appear to exist when new companies have significant university connections. Such hazards may develop as a result of a university-business technology license or because university faculty are members of the management team. In some instances, inventors' participation in a new business may overly strengthen intellectual property protection, whereas in others, the developers of a nascent technology may exaggerate the technology's capabilities (30).

1.4. Policies supporting financial incentives in young innovative enterprises

Since Schumpeter's (1934) work, it has been generally accepted that entrepreneurs and new enterprises play a significant role in innovative activities. Startups, and YICs in particular, are increasingly regarded as the generator of technological change and economic development, frequently introducing market-altering innovations (27).

However, the creation and introduction of innovations do not always result in enhanced economic performance for the innovator (18).

YICs must appropriate the returns of their innovative activities by safeguarding their knowledge assets with "isolating mechanisms" or "resource position barriers" in order to acquire, maintain, and exploit a competitive advantage (28).

When deciding how to appropriate the benefits of their innovation activities, young innovators must choose between formal and informal mechanisms of appropriation. There are numerous advantages associated with each form of mechanism. Formal appropriation mechanisms provide the benefits associated with the exclusive right to use or sell an invention from the perspective of the inventor. IPRs may also be utilized "strategic" by innovators. Patents may be used, for instance, to enhance a company's reputation, to erect barriers to increase replication costs, to amass bargaining assets for use in forming strategic alliances, or to secure collateral in order to attract financing (17).

However, formal mechanisms have disadvantages as well. First, substantial financial resources are needed to effectively implement formal protection mechanisms. Second, patents necessitate the disclosure of vital information and knowledge that competitors can use to circumvent or even imitate the invention. Formal mechanisms necessitate human, social, and reputational capital to produce innovation outcomes (15).

In terms of informal mechanisms, lead time confers a 'first mover' advantage on the innovator, as the duplication of an invention is frequently time-consuming and expensive. The first-mover advantage enables innovators to recoup their costs. The legal protection for secrecy to prevent the disclosure of invention-related information

is limited. It confers a first-mover advantage, limits competitors' ability to imitate the innovation, and may inhibit reverse engineering. Utilizing complementary assets, such as marketing, competitive manufacturing, and after-sales support, is beneficial for appropriating innovation's returns (21).

These rare, valuable, and difficult-to-replicate assets serve as entry barriers and provide their proprietor with a competitive advantage. Clearly, informal mechanisms also have significant drawbacks. All of these informal mechanisms may incur significant implicit or explicit costs, rendering them inaccessible to the vast majority of YICs. In addition, informal mechanisms are somewhat risky because their implementation depends on internal capabilities or external factors (such as the availability of complementary resources through partners, customer loyalty, potential exogenous shocks in the technology sector, etc.).

The strategic decision regarding whether or not to use protection mechanisms to defend innovation may be influenced by a number of barriers or incentives that YICs confront due to their youth and small size liabilities.

The primary obstacles faced by YICs are associated with their primary inputs, capital and labor. Almost everyone agrees that YICs are subject to significant financial constraints. There is abundant evidence in the financial literature of resource constraints and their detrimental effects on the innovative performance of young, innovative companies. These monetary constraints may prevent YICs from covering the substantial costs associated with the innovative process. Prior empirical research affirms that one of the greatest impediments for innovative start-ups is the high costs associated with formal protection mechanisms, resulting in a relatively low demand for patent protection. These costs include process and translation fees, external expenses, and costs associated with maintenance, monitoring, and enforcement. In addition, YICs frequently lack the financial resources required to acquire access to and control over complementary assets (e.g., distribution channels, brand recognition, external knowledge) required to commercialize the outcomes of their innovation activities. As a result, they are dependent on cooperation with external partners – at

least in the early stages of their development – and are unable to fully appropriate the returns from their innovative activities.

The most significant barrier for YICs in terms of employment is the rigidity of the labor market. Consequently, YICs encounter difficulties in reducing high labor fixed costs, locating qualified workers, and retaining them through the provision of the proper incentives. These obstacles may inhibit YICs' inventiveness. In this regard, the labour economics and innovation literatures have provided evidence of the positive effects of qualified personnel on the innovative performance of firms, particularly YICs, and argued that flexibility may be especially important for start-ups. Contract flexibility enables YICs to employ labor forces based on their capital availability, thereby reducing total fixed labor costs. This permits YCIs to invest more capital in innovative initiatives. In addition, the flexibility of contracts allows YICs to strengthen employer-employee relationships and acquire the new skills and networks of connections that newly skilled employees possess. Lastly, wage flexibility can enhance the innovative activities of YICs by attracting highly qualified employees, increasing employee effort, and facilitating the sharing of organizational knowledge.

The view that public policy intervention is vital for young innovative companies to overcome financial and labor obstacles has led governments all over the world to seek out and implement specific national (and pan-national) policy measures with the express intention of providing help to YICs. This is in response to the belief that public policy intervention is important. These actions have been made with the specific intention of providing assistance to YICs as their primary focus. When young innovative businesses (YICs) take advantage of national Startup Acts, they are eligible for tax breaks, expedited access to resources, and other perks that are meant to assist their development and, most importantly, their creative processes. These benefits are designed to encourage and support the growth of young innovative enterprises. These policies include tools that promote the flexibility of labor, such as performance-based compensation schemes, flexible contracts for workers, and tax benefits for the hiring of highly trained individuals. In other words, these measures

aim to make labor more adaptable. In addition, these steps include the implementation of tools that make it simpler to get access to other forms of finance, such as loans and investments from private investors. It is not clear, taking into account the potential costs and challenges involved, to what extent and in what ways young creative enterprises are willing and able to make use of this assistance while they are developing their products or services. In this research, we analyze the degree to which young innovative firms (YICs) are able to benefit from the elimination of monetary and labor constraints that were made practicable as a consequence of institutional change. Specifically, we look at how YICs are able to capitalize on the removal of these obstacles. In particular, we look at whether or not YICs report having a larger propensity to use preventive measures. In addition, one of our objectives is to conduct research on the question of whether or not the specific efforts of institutional reform to simplify access to capital and improve the flexibility of labor might convince young creative enterprises to choose official protection mechanisms as opposed to informal ones.

II CHAPTER. FOREIGN EXPERIENCE OF INNOVATIVE ENTREPRENEURSHIP FOR ECONOMIC DEVELOPMENT

2.1. Innovative entrepreneurship for economic development in developing countries

In emerging nations, innovative entrepreneurship is a key factor for progress. It leads to societal transformation, economic expansion, and the development of new jobs. Here are some things to think about (32).

Scheme 2.1.1: Innovative entrepreneurship for economic development in developing countries.

Source: the scheme has been compiled by the author according to "[11]"

1. The significance of inventive entrepreneurship.

Innovative entrepreneurship provides special remedies for regional issues. Due to a lack of resources, entrepreneurs in developing nations are frequently very inventive. Innovative ideas and fresh business strategies are frequently needed because of the limited resources and complex local concerns. This may result in the development of goods and services tailored specifically to the requirements of regional communities.

2. Challenges.

However, business owners in emerging nations also confront a number of difficulties. They could suffer with corruption, lack access to financing, inadequate infrastructure, insufficient resources, or legal and regulatory obstacles. Challenges might also come from societal stigma and cultural conventions, especially for female business owners.

3. Technology's Function.

Technology is essential to entrepreneurial innovation. With the development of the internet, mobile technology, and social media, business owners now have unprecedented access to international markets and a plethora of knowledge. Big data, artificial intelligence, and blockchain technologies all have the potential to solve issues in novel ways. People who were previously underserved by traditional banks now have access to financial services, for instance, thanks to peer-to-peer lending platforms and mobile banking.

4. Training and Education.

Programmes for entrepreneurship education and training are essential for promoting an entrepreneurial culture and giving aspiring entrepreneurs the tools they require.

5. Governmental Guidelines and Rules.

Government policies that are encouraging can be very important in promoting entrepreneurship. This can be tax breaks, streamlined procedures for registering businesses, or programmes that support capital access. The infrastructure that is necessary for companies, such as transportation, energy, and internet connection, can also be funded by the government.

6. Capital Access.

Entrepreneurs in poor nations sometimes struggle to get the funding they need to launch or grow their firms. Peer-to-peer lending platforms and microfinance have become crucial sources of cash for small business owners. Additionally, the expansion of impact investment and crowdfunding may help creative firms get the finance they require.

7. International Organisations' Function.

Entrepreneurs in poor nations frequently receive assistance from international organisations like the World Bank, the United Nations, or numerous NGOs. This might take the form of direct financial assistance, educational and training programmes, or campaigning to advance laws that foster entrepreneurship.

8. Social entrepreneurship and environmental protection.

In developing nations, a lot of businesspeople are concerned with sustainability and social effect. They innovate to address social or environmental problems, adding value for both the business and society. These efforts frequently align with the Sustainable Development Goals (SDGs) of the UN, which may draw financing from impact investors and international organisations.

In this paragraph, I will consider innovative entrepreneurship directions on the example of a number of developing countries.

Let's take Algeria as an example of an Arabic developing country which is popular for its richness in raw materials.

Algeria is the largest country in Africa and is known for its abundance of hydrocarbon reserves - primarily natural gas and oil. The hydrocarbon sector is the backbone of Algeria's economy, accounting for about 20% of its gross domestic product (GDP), 85% of its total export revenue, and over half of the government budget revenue in 2021. Algeria is the fourth-largest gas exporter in the world, has the third-largest untapped shale gas deposits in the world, and has the tenth-largest verified natural gas reserves in the world. The market size is used to calculate each of

these data. Additionally, it exports almost 60% of its whole output and ranks fifteenth in terms of proven oil reserves. The totality of the country's recognised oil reserves are found onshore. Around two-thirds of Algeria's acreage has not yet been properly explored or exploited, and there are reportedly 100 discoveries that have not yet been developed, according to Sonatrach, the country's national oil firm.

Table 2.1.1: Natural Gas (million cubic meters).

	2023 Projected	2022 Estimated	2021	2020
Total Imports		0	0	0
Total Exports	68,802	65,330	56,556	39,459
Total Local Production	112,838	108,667	104,043	85,119
Exchange Rates (DA/USD)	145.52	142.63	135.06	126.78
Total Market Size	44,036	43,337	47,487	45,226
Imports from the U.S.		0	0	0

Source: [62].

The following is how the innovation and also the entrepreneurship have played a key role in Algeria's entrepreneurship:

Digital Technology. Algeria has seen significant growth in digital technology entrepreneurship in recent years, and this sector has become a key part of the country's economy. Internet penetration in Algeria has been increasing rapidly, reaching around 50% of the population in 2021, according to DataReportal. This growing digital connectivity has spurred the development of a vibrant tech startup scene. There has been an emphasis on e-commerce, edtech, and digital health solutions, among other areas (70).

In the education technology (edtech) sector, Djebra stands out as a significant player. Djebra is an online learning platform that provides interactive courses aligned with the Algerian curriculum for primary and secondary students. In response to the COVID-19 pandemic and the shift to remote learning, Djebra saw a signficant increase in its user base (22).

There's also innovation in health technology (healthtech) as startups leverage digital platforms to provide remote healthcare services. Medicus is one example, a platform that connects patients with healthcare professionals for online consultations.

This has been particularly important in the context of the COVID-19 pandemic, allowing people to access healthcare from home. Moreover, the Algerian government has shown commitment to supporting the digital technology sector. In 2019, the government announced the creation of "Smart Algeria 2023," a strategy aiming to make digital technology a key driver of economic growth. This included plans to foster a conducive environment for tech startups and digital entrepreneurship (71).

Renewable Energy. Renewable energy in Algeria has become a significant area of focus in recent years. The country's location in the Sahara Desert, receiving an average of more than 3,000 hours of sunshine per year according to the International Renewable Energy Agency (IRENA), makes it an ideal location for the development of solar power [63].

In fact, Algeria has one of the highest solar potentials in the world. The country's 2030 Renewable Energy and Energy Efficiency Program aims to produce 22 GW of electricity from renewable sources by 2030, of which 13.6 GW is expected to come from solar power [64].

A notable Algerian company in the renewable energy sector is SKTM (Société Algérienne de Production de l'Electricité), a subsidiary of Sonelgaz Group, which has been involved in several solar and wind energy projects. For instance, the Ghardaia solar plant, operational since 2011, has a capacity of 13.5 MW, making it one of the largest solar facilities in the country. Moreover, the country's first wind farm, located in Kabertene, has an installed capacity of 10 MW [65]

Algeria is also investigating the potential of other renewable sources like wind and geothermal energy. In terms of wind energy, Algeria has an estimated potential of 35,000 MW, with the coastal regions and the high plateaus being particularly favorable. The government has been supporting this sector by creating a favorable regulatory framework for renewable energy, with measures to encourage private investment and the creation of a fund to support renewable energy and energy efficiency [66].

Agriculture. Innovative entrepreneurs are applying technology to improve agricultural productivity and sustainability. For instance, the startup Agrify developed

an application that uses AI to diagnose crop diseases and offer treatment recommendations [67].

Fintech. The financial technology sector is growing in Algeria, with startups like Square Pay offering digital payment solutions to individuals and businesses [68].

2.2. Innovative entrepreneurship for economic development in developed countries

We will consider the US experience as a developed country.

Silicon Valley, located in the United States, is globally recognised as the epicentre of innovation and entrepreneurship, nurturing a culture that promotes cutting-edge technologies and business concepts. Numerous tech titans and startups reside there, making it a dynamic ecosystem that attracts top talent and investment, thereby nurturing innovation and competition. This thriving region provides the ideal environment for the success of entrepreneurs, with readily available venture capital funding, mentoring, and networking opportunities. Silicon Valley's pioneering character has produced numerous revolutionary products and services, effectively altering the global technology landscape. The United States, and specifically Silicon Valley, have used innovative entrepreneurship for economic development in the following ways:

1. Development of New Technology. Silicon Valley is home to many high-tech companies, including Apple, Google, and Facebook. These companies are at the forefront of innovation in technology and are continually developing new products and services, driving economic growth.

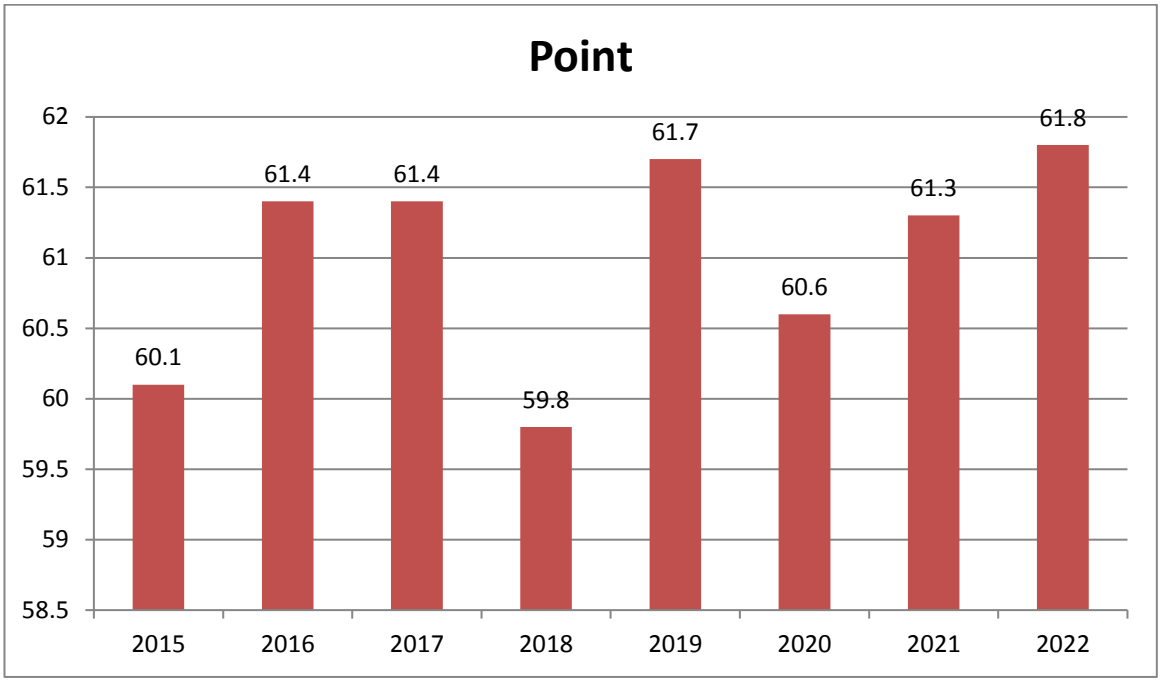
2. Creation of High-Quality Jobs. The high-tech companies in Silicon Valley create a significant number of jobs. These jobs often require a high level of skill and therefore pay well, contributing to increased purchasing power and a strong economy.

3. Attraction of Foreign Investment. Because of its reputation as a hub of innovation, Silicon Valley attracts a significant amount of foreign investment. This capital influx aids in the economic development of the region.

4. Education and Skills Training. Universities in the United States, such as Stanford and Berkeley in the Bay Area, are renowned for their research and innovation. They produce highly skilled graduates, many of whom go on to become entrepreneurs. The presence of these universities contributes to the innovative entrepreneurial culture of the region.

5. Favorable Regulatory Environment. The US government provides various incentives to encourage entrepreneurship, such as tax incentives, grants, and other forms of support. The Small Business Administration (SBA), for example, offers resources and loan guarantees to small businesses.

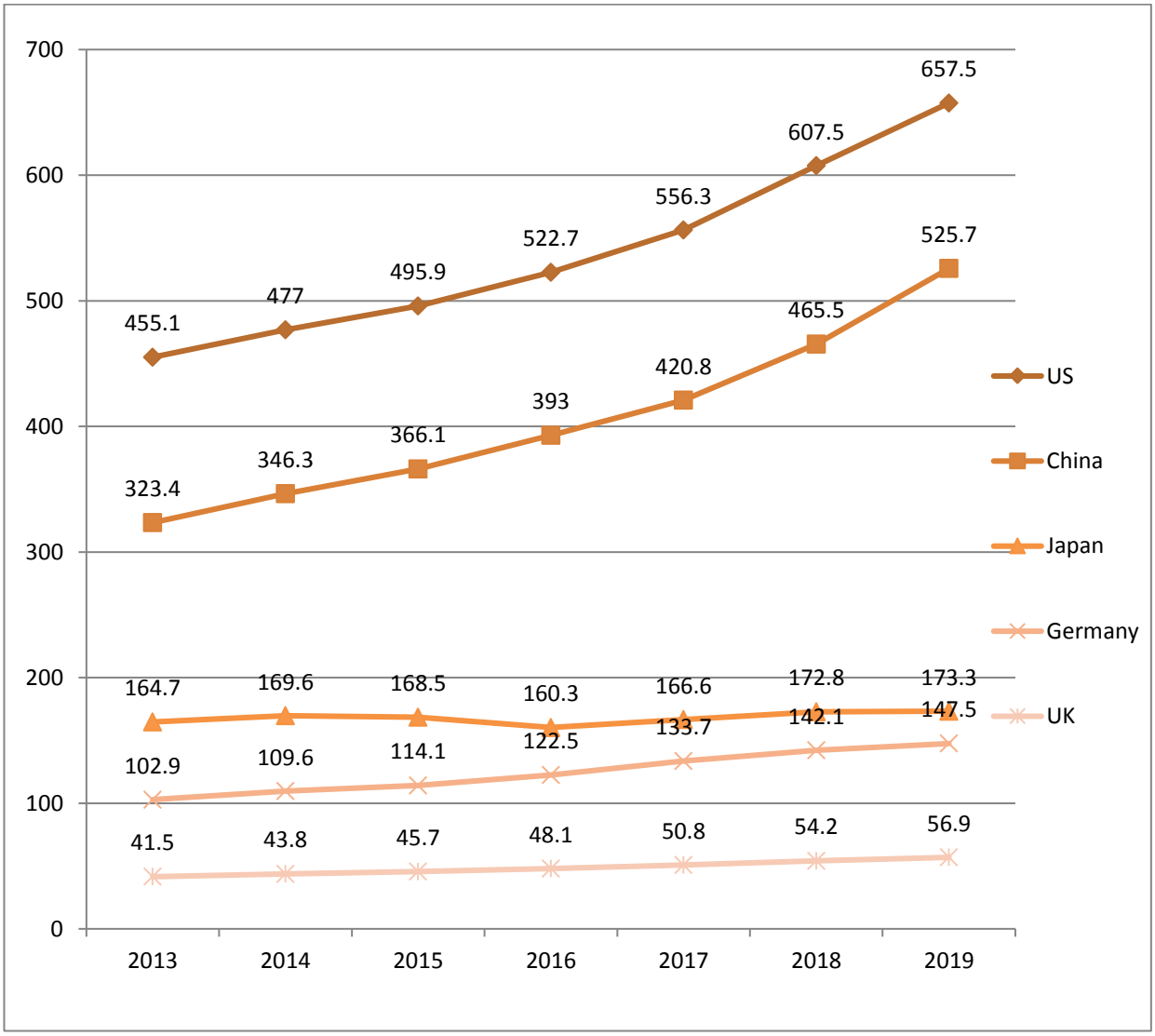
Graph 2.2.1: USA: Innovation index.



Source: the graph has been compiled due to "[48]" by the author.

We provide data on the aforementioned indicator for the United States of America for the years 2011 through 2022. During that span of time, the United States saw a variety of values, with the lowest being 56.6 points in the year 2011 and the highest being 61.8 points in the year 2022. During that span of time, the average score for the country of the United States was 60.23 points. The most current number available, which is 61.8 points, was collected in the year 2022. For the year 2022, the overall average score for all 128 countries comes in at 32.09 points. This serves as a point of comparison.

Graph 2.2.2: Gross domestic expenditures on R&D, by countries.



Source: the graph has been compiled due to "[49]" by the author.

From the data above, the United States has consistently spent more on research and development (R&D) than the other four countries (China, Japan, Germany, and the UK) from 2013 to 2019. All five countries have increased their R&D expenditure over this period, but the rate of increase varies. The US and China show the most substantial growth in R&D expenditure, indicating a strong emphasis on innovation and technological development. China, though starting at a lower base than the US in 2013, has had a significant increase, demonstrating its fast-paced growth and commitment to advancing its technological capabilities.

The US leads in absolute terms of R&D expenditure, however, the rate of increase for China appears to be higher. This could signal that China is closing the gap with the US in terms of investing in innovation and technology development.

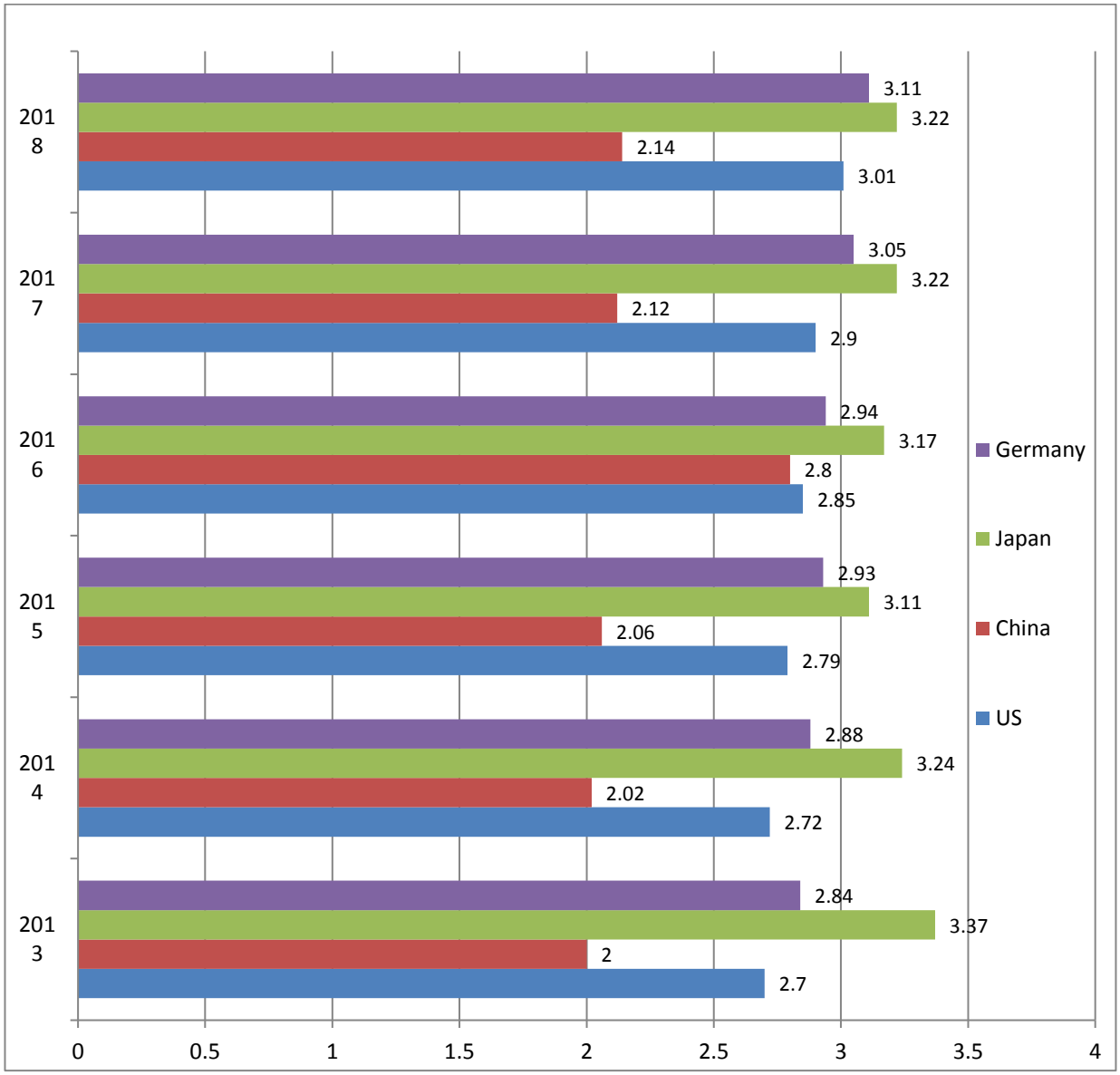
Japan, Germany, and the UK also show an increase in R&D expenditure, but the growth is not as pronounced as in the US or China. Despite this, they maintain significant R&D spending, indicative of their continued commitment to innovation.

The high R&D expenditure of these countries, particularly the US and China, likely contributes to their influence on global innovation trends. They are known for their high-tech industries and technological advancements, which are fueled by this R&D spending.

The listed countries are some of the world's largest economies. Their significant investment in R&D underscores the importance of innovation in maintaining and enhancing their economic power and competitiveness.

The data reveals a continued emphasis on R&D in these countries, with the US leading in absolute terms. The rapid growth in China's R&D expenditure, however, indicates that it is making substantial strides in its pursuit of technological innovation and may continue to close the gap with the US. The importance of innovation in economic development and competitiveness is clear across all these nations.

Graph 2.2.3: Gross domestic spending on R&DTotal, by the % of GDP.



Source: the graph has been compiled due to "[59]" by the author.

This data shows the percentage of GDP that each country (US, China, Japan, and Germany) spent on research and development (R&D) from 2013 to 2018.

Each of the four countries has generally increased the proportion of their GDP that they invest in R&D over this period. This suggests an increasing recognition of the importance of R&D to economic growth and competitiveness.

Japan consistently spent the highest percentage of its GDP on R&D throughout these years. This is indicative of the country's emphasis on technology and innovation as drivers of its economic success.

Germany also shows a steady increase in the proportion of GDP invested in R&D, with its percentage exceeding that of the US in every year of this dataset and surpassing China's percentage in 2016.

While the US had the largest absolute R&D expenditure in the previous dataset, it does not allocate the highest percentage of its GDP to R&D in this dataset. However, it does show a gradual increase over these years, indicating a steady commitment to R&D.

China began with the lowest percentage of GDP invested in R&D but showed significant growth over this period, overtaking the US in 2016 and maintaining a higher percentage thereafter.

Looking at the percentage of GDP spent on R&D by the United States from 2013 to 2018, there has been a steady increase each year. In 2013, the US spent 2.7% of its GDP on R&D, which increased to 2.72% in 2014, then further to 2.79% in 2015, and 2.85% in 2016. In 2017, it grew to 2.9%, and by 2018, the expenditure had reached 3.01% of GDP. Overall, this represents a growth of approximately 0.31 percentage points or an 11.48% increase in the proportion of GDP spent on R&D over the span of six years, from 2013 to 2018. This indicates the United States' increasing emphasis on research and development to fuel innovation and support economic growth.

III CHAPTER. ECONOMIC POLICY, INNOVATIVE DEVELOPMENT, AND ENTREPRENEURSHIP IN AZERBAIJAN

3.1. Azerbaijan’s economic structure and national priorities

The newly independent nation of Azerbaijan is experiencing a watershed moment in terms of the country's cultural, social, political, and economic development. The country's economy has been bolstered and brought up to date as a direct result of the deliberate socio-economic shifts that have been implemented in the country throughout this period of transition. In the past 17 years, the gross domestic product of our nation has more than doubled as a result of rapid development. In addition, a robust socioeconomic infrastructure has been established, and the degree of poverty has significantly decreased within the context of positive population increase. Our current financial outlook has reached an all-time high, and as a result, we have strengthened our standing within the group of nations that have an upper-middle income.

Because of our growing economic prowess, Azerbaijan has been able to launch significant projects that have the potential to effect the economies of neighbouring areas and the South Caucasus as a whole. Our country, which acts as the engine that propels the economy of the region, has emerged as one of the most trustworthy friends in the worldwide struggle to safeguard the safety of energy resources. All of these factors have contributed to an increase in the significance of Azerbaijan's economy in the surrounding region, laying a solid basis for the country's ability to withstand pressure from the outside world and to regain its status as a sovereign, independent state.

The roots of the country's sociopolitical and economical systems, as well as its military strength, have been formed over the course of a number of years' time. Additionally, economic gains have been accomplished. These accomplishments culminated in a historic win that freed our regions from occupation and restored our territorial integrity. This victory may be attributed to the fact that these successes

were transformed into a historic victory. The historic Declaration issued on November 10, 2020 presents enormous opportunities for the best use of the existing economic potential of the liberated regions for the benefit of our nation. This declaration guarantees both the political and economic sovereignty of Azerbaijan. It was signed on November 10, 2020. This victory will provide new opportunities in the years to come through improvements that are systematic and long-lasting.

At the same time, our successful battle against the coronavirus pandemic, which is a global catastrophe, together with our practise of solidarity for the common good and our restoration of territorial integrity, establishes the essential foundations for big reforms on a vast scale. Because of the reforms that have been implemented over the last few years, the socioeconomic potential of our nation has grown, and the resilience of our economy to shock from the outside world has improved. A solid foundation has been laid for Azerbaijan's eventual ascent to a higher quality level of development and its emergence as a rapidly expanding, highly prosperous, and leading state on the global stage as a direct result of the execution of socioeconomic operations and the safeguarding of our territorial integrity. From this solid platform, Azerbaijan will eventually advance to a higher quality level of development.

The independent and sovereign state of Azerbaijan is about to enter a strategic time that will last from 2021 through 2030. This period will be fundamentally different from any other that will occur in the post-pandemic and post-conflict eras. Deep structural and institutional reforms are required to further increase the power of the Azerbaijani state in these new times, which are characterised by the restoration of the country's territorial integrity. This must be accomplished by the discovery of sources of high economic growth, the establishment of a more prosperous society, and the historical return to liberated regions with permanent resettlement therein.

The realities of the global economy, in addition to the goals that have been established for our new stage of development, necessitate the definition of the long-term development vector for the country, of our primary paths to socio-economic growth, and of the national priorities that correspond to those pathways. These

definitions are required because the goals that have been established for our new stage of development have been established.

In accordance with the provisions of paragraph 32 of Article 109 of the Constitution of the Republic of Azerbaijan, in order to accomplish the goals we have set for ourselves in this new epoch of strategic importance and to construct an appropriate policy and reform framework, I have come to the following conclusion:

1. To give the green light for the paper with the working title "Azerbaijan 2030: National Priorities on Socio-Economic

"Development"

2. We are in the process of forwarding the following communication to the Cabinet of Ministers of the Republic of Azerbaijan:

2.1. To develop and submit to the President of the Republic of Azerbaijan, within a period of nine months, the draught of the "Strategy of Socio-Economic Development in 2021-2025" in accordance with the National Priorities (hereafter referred to as the National Priorities) established under Part 1 of this Order.

2.2. To make sure the following is taken care of throughout the process of formulating the "Strategy of Socio-Economic Development in 2021-2025":

2.2.1. Collaboration with prominent international institutions and specialised consulting companies that is both beneficial and profitable

2.2.2. Participation of the Appropriate State Agencies (Institutions), Scientific Organisations, Professionals, and Institutions of Civil Society

2.3. You are obligated to present the President of the Republic of Azerbaijan with an up-to-date report on the implementation of the National Priorities at least once per year.

2.4. In order to address any other issues that may have been brought to light as a direct result of this Order

3. In order to satisfy the duties that have been deduced from the National Priorities, the relevant state organisations (institutions) are expected to take the appropriate actions in the direction of fulfilling those responsibilities.

The Azerbaijani Government's Priorities for the Country's Socio-Economic Development Through the Year 2030.

Azerbaijan, has been recognised by the global community as a provider of a safe, risk-free, and contemporary standard of living. This recognition came as a result of our nation's dedication to improving people's living conditions. In spite of the difficult period in our history that we went through at the end of the 20th century, this is the situation that we find ourselves in today. Both the economical and cultural components of our life have gone a long way, and we can reflect on that journey with a sense of accomplishment and satisfaction. Our country's reputation in the international community has been significantly improved, our traditions of statehood in society have been strengthened, and a modern socioeconomic infrastructure has been successfully constructed. Strong financial opportunities, which have their roots in economic development, have made significant contributions to macroeconomic stability and growth throughout the years, therefore providing substantial grounds of security. These contributions have been made possible by the fact that economic development is where strong financial possibilities originate. The economic growth that has taken place throughout the course of this time has made it feasible for these contributions to be made.

The reintegration into the general economy of our newly freed areas as a consequence of the victory against occupation, as well as the harnessing of the prospects for new international and regional transport and logistics corridors, will give Azerbaijan's growth a tremendous push, which will ultimately result in the rapid advancement of the country. It has become abundantly clear that regional formations of security, stability, prosperity, and cooperation that is mutually beneficial, coupled with the development of trade and economic ties, will further enhance the role of Azerbaijan as a leader state in the South Caucasus. This realisation came about during the process of defining the overall economic architecture of greater Karabakh.

Azerbaijan is situated in an advantageous position at a crossroads between East and West, and the country's recent achievements in the economical and political spheres, in addition to its dedication to national and multicultural ideals, provide

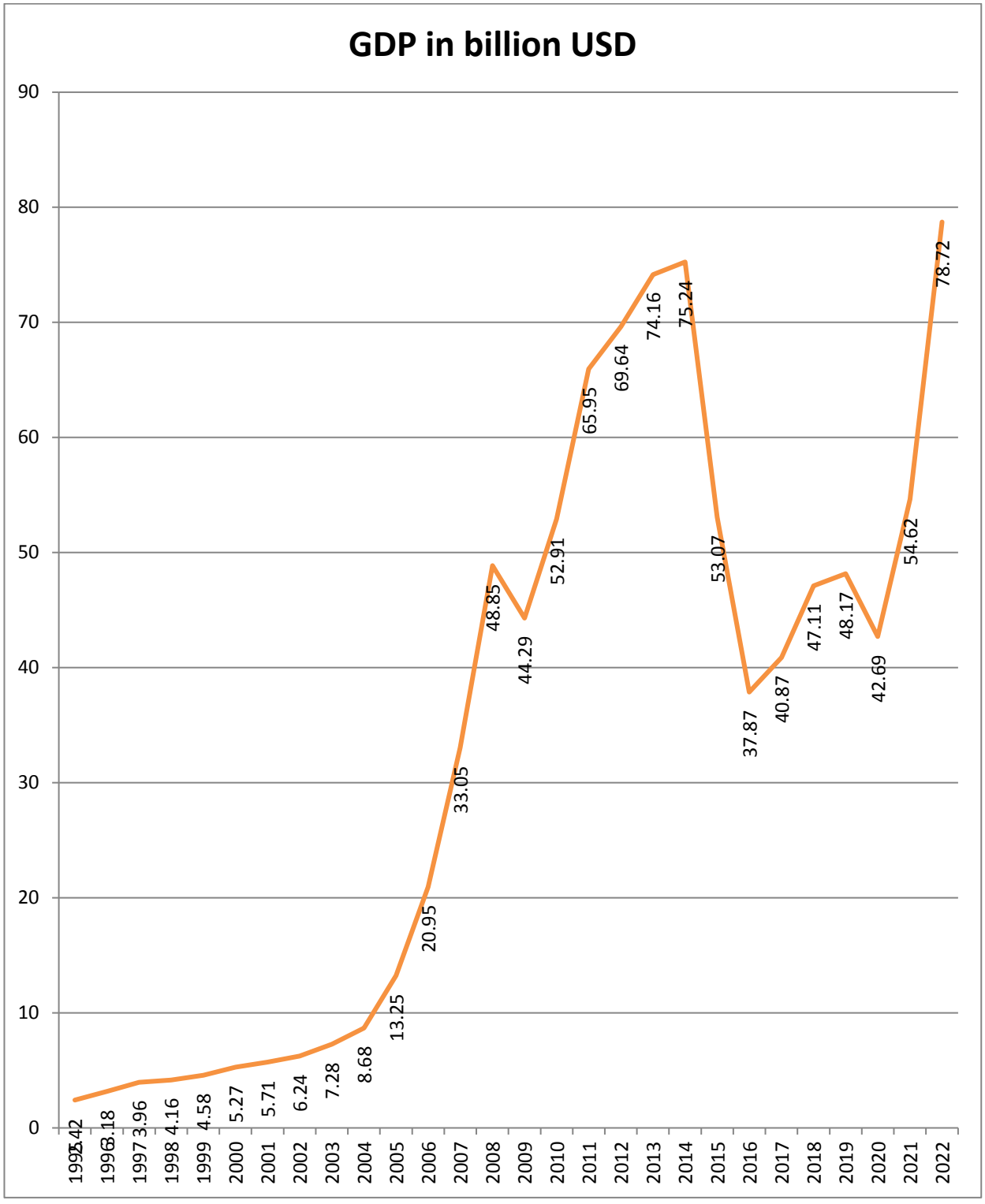
grounds for hope regarding the country's potential to continue to extend its sphere of influence in the years to come. These opportunities assure that Azerbaijan's economic sovereignty will get stronger, and that the nation will be turned into a powerful state by the year 2030, with high social welfare based on a modern quality of life. This transformation will take place within the country. This shift in behaviour is going to take place. A socially-oriented market economy is the road that the Azerbaijani state has decided to pursue in order to expand in order to greatly enhance the level of life of the country's inhabitants. This is the path that the Azerbaijani state has chosen to take in order to grow in order to improve the standard of living of the country's people.

The acceleration of economic growth that is high, sustainable, inclusive, and most crucially, based on private efforts is at the ideological heart of Azerbaijan's new development route. This growth must be founded on high standards and must be inclusive of all sectors. This assures both a steady rise in the overall level of national social assistance as well as the relocation of residents to areas that have just recently been freed from occupation.

3.1.1. The role of entrepreneurship in the economic growth of Azerbaijan

First of all, let's consider the GDP indicators of Azerbaijan.

Graph 3.1.1: GDP of Azerbaijan during 1995-2022 (in billion USD).



Source: this graph has been compiled due to the data which has been retrieved from the sites "[57]" and "[69]".

As can be seen, the GDP, which reached a record high of 75.24 billion USD in 2014, decreased by 42% to 53.07 billion USD in 2015 due to the steep decline in oil prices and devaluation. The primary factors for the drastic decline in GDP are:

- a decline in budget revenue from exported oil and oil products as a result of the decline in the price of crude;

- the occurrence of a natural decline in the total calculated GDP as a result of the fluctuation in the value of our exchange rate relative to the foreign currency;

- the deterioration of purchasing power and, consequently, of consumption as a consequence of declining population incomes;

- weakening of supply and production in particular as a result of reduced demand;

- micro, small, and even medium-sized businesses cannot withstand these disruptions and have declared a crisis.

In 2021, Azerbaijan's gross domestic product represented only 0.02% of the global economy.

The table that follows details the number of large, mikro, and also medium-sized enterprises in Azerbaijan, as well as their respective industries.

Table 3.1.1: "The number of micro, small, and medium-sized firms in Azerbaijan by ownership type and economic activity in 2020."

Indicators	Total	İncluding				
		State	Non-state	Of them		
				Private	Foreign	Joint
Total, including by type of economic activity	316370	1811	314559	311296	2519	744
Agriculture and fisheries	3264	162	3102	3034	40	28
Industry	14007	476	13531	13154	266	111
Construction	11670	182	11488	11169	235	84
Trade and repair of ve-hicles	103707	135	103572	102674	691	207
Transport andwarehousing	65987	189	65798	65653	109	36
Tourist accommodationand catering	20513	17	20496	20302	148	46
Information andcommunication	6939	130	6809	6696	90	23
Real estate transactions	7282	93	7189	7122	42	25
Education	6358	52	6306	6237	49	20
Health and social services	3793	52	3741	3699	35	7
Other industries	72850	323	72527	71556	814	157

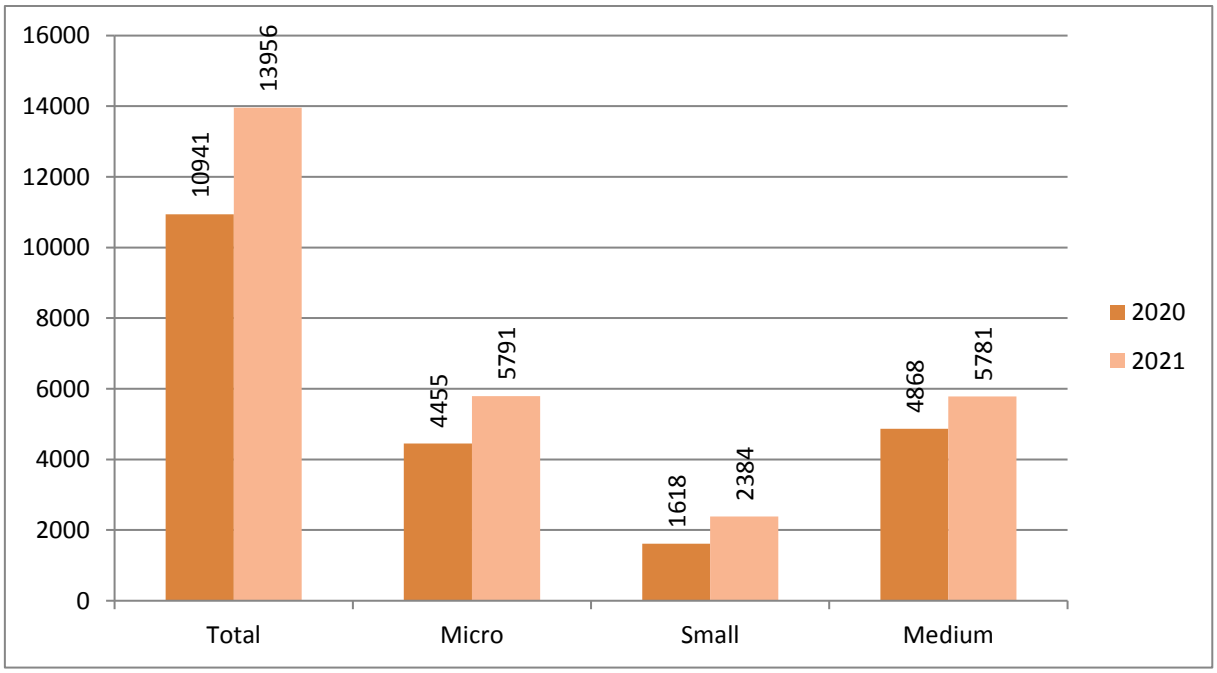
Source: The table has been compiled according to "[56]".

According to a study on the number of small and medium-sized enterprises in Azerbaijan, there will be 316,370 businesses in the country in 2020, of which 8,7 thousand will be classified as SMEs. The preponderance of the responsibilities of the Ministry of Railways involve the trading and maintenance of approximately 2.5 million vehicles, compared to approximately 1.4 million vehicles in the industrial sector.

The reason why we only take 2020 as the year of analysis here is that after the pandemic in 2020, entrepreneurs officially registered their businesses to benefit from one-time assistance and benefits. Already from 2020, we can observe that more accurate statistics are reflected in the country. Therefore, the analysis of 2020-2021 will provide more accurate indicators.

Using the illustration provided below, let's become acquainted with the indicators of added value created by small- to medium-sized and microenterprises in Azerbaijan.

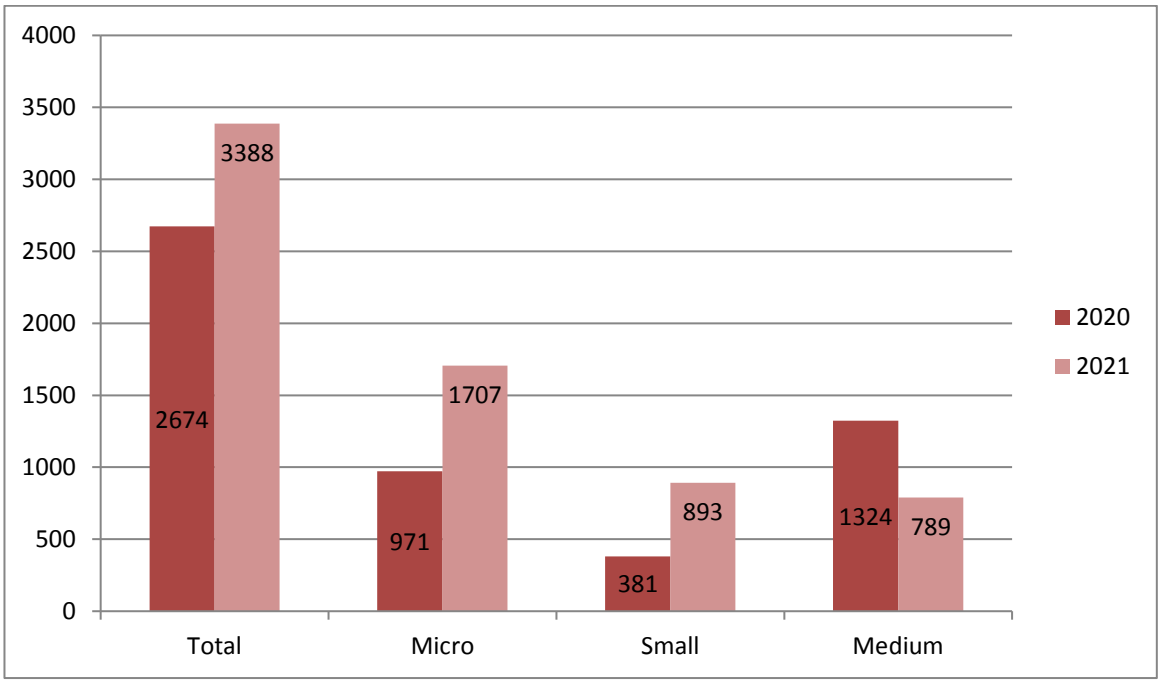
Graph 3.1.2: "Value added by entrepreneurship in Azerbaijan, million AZN."



Source: the following graph was compiled due to the data which has been retrieved from "[56]".

Comparing 2021 to 2020, it is evident that the volume of micro and SME added value has increased. In 2021, the total added value increased by 27.5%. The value added by small businesses increased by 47.34 percent, while the value added by medium businesses increased by 18.75 percent.

Graph 3.1.3: "Investment directed to fixed capital, million AZN."



Source: the following graph was compiled due to the data which has been retrieved from "[56]".

As may be observed, total fixed capital investment increased by 26.7% between 2020 and 2021. Comparing the same periods, the investment in fixed capital by small businesses increased by 2.3 times, while the same indicator decreased by 40% for medium-sized businesses.

3.1.2. Innovation and investment climate

An interview with Mubarish Shahbazli, who is the director of the UNEC Business Centre and the head of the Startup Incubator, was conducted as a practical component of my subject matter. It is important to point out that Mubariz Shahbazli became one of the founding members of both Business Angels and the Divida Angel

Club. The topics of angel investors and venture finance were brought up in conversation with Mr. Mubariz. Mubariz Shahbazli, when speaking about angel investors, mentioned that one of the most significant challenges is that the paperwork process for incubators takes a certain amount of time since incubators are public legal companies. This delays the activity, which in turn produces a problem because it affects the activity's efficiency.

Table 3.1.2: "Actual startup companies in Azerbaijan in 2023."

№	Name	Description
1.	Probiont	Home hydroponics - plant growing startup using soilless farming system
2.	4You	This offers online customized gifts.
3.	iSU	iSU is a platform that provides apartments with rapid delivery of significant volumes of water
4.	HIRPO	This offers small and medium-sized enterprises automated performance management solutions that are both readily available and simple to implement.
5.	Eddy	This promotes personalized multitasking learning systems to individuals using game logic.
6.	Taky	This is a platform designed to reduce wait times and optimize the order preparation process at takeout locations.
7.	FeedHub	An online platform designed as a networking tool for sharing and responding to feedback between businesses and consumers.

Source: [61].

In the above table, examples of startup companies models that are relevant in Azerbaijan are given. Unfortunately, due to the fact that these models are new and many of them have not been implemented, there is no more extensive information about them and application directions.

Table 3.1.3: "Potential Startup projects."

Projects	**The purpose of the program**
Technest Scholarship Program	The goal is to contribute to the process of creating a personnel bank in the field of ICT in the country and to meet the personnel needs in the labor market.
Caucasian Ventures	The fund invests in post-seed growth and A-stage startups.
Nuclear Research Department	It provides paid services to private and state organizations in the field of nuclear sciences and nuclear technologies in the Republic of Azerbaijan
Ecosystem map	The ecosystem map is an information page that reflects all the participants of Azerbaijan's innovation ecosystem and information about them.
IDDA Awards	The main goal is to introduce and support the activities of the most promising innovators of the ecosystem, to create a competitive environment among players actively involved in the development of the country's innovation, and to increase interest in this field.
Relocation program	With this center, cyber security training is planned for 1000 people in Azerbaijan within 3 years.
Technopark	For the rapid development of the ICT field in the world and the increase of competition in this direction, the creation of relocation programs has been started in the country's policies.
Towards digital Azerbaijan	Innovation and Digital Development Agency implements the process of applying to the technopark, evaluating applications and granting residency.
Technest Scholarship Program	The goal is to contribute to the process of creating a personnel bank in the field of ICT in the country and to meet the personnel needs in the labor market.

Source: [61].

Now let's consider the above potential startup projects in more detail.

"Technest Scholarship Programme"

The Technest Scholarship Programme was introduced by the Ministry of Digital Development and Transport in October 2021. Its principal purpose is to cover job openings in the information and communications technology (ICT) industry. In its first year, the programme awarded scholarships to over 600 students, and its second-year aim is to support 3,000 students.

The scholarship programme is competitive, requiring students to submit online applications and participate in particular examinations and interviews. Scholarships covering 70%, 90%, or 100% of the total expense are restricted to those who successfully complete all phases. Depending on the chosen educational path, the minimum age requirement for the scholarship varies.

Caucasus Ventures is a venture capital fund that supports innovation ecosystems. The Innovation and Digital Development Agency, the PASHA Holding Group of Companies, and private investors established the company. The fund, which has an authorised capital of 11,300,000,000 manats, concentrates on post-seed growth and A-stage companies. PASHA Holding Group contributed 5 million manats, individual enterprises contributed 1.3 million manats, and the Innovation and Digital Development Agency contributed 5 million manats. Over the span of five years, Caucasus Ventures will invest in companies from Azerbaijan, Georgia, Turkey, Central Asia, and Eastern Europe.

The executive state institution in the Republic of Azerbaijan concentrates on nuclear sciences and nuclear technologies. Its Nuclear Research Department provides numerous services to public institutions and private companies, including sterilisation, radioactive substance analysis, nuclear and radioactive material expertise, and nuclear and radiation sciences instruction for personnel.

The agency's strategic goals include providing analysis and expertise services on nuclear and radioactive materials, maintaining and developing highly qualified personnel, acting as the primary executive agency for nuclear technology initiatives, expanding material and technical resources through projects, grants, and internal opportunities, and striving to become a regional producer of medical radioisotopes by continuously enhancing research and service quality.

The ecosystem map is a thorough informational resource that emphasises the innovation ecosystem participants in Azerbaijan and provides pertinent details about them. This map aims to promote the innovative development of Azerbaijan on a national and international platform. Individuals and organisations interested in joining the ecosystem map can submit a request to have their initiatives included, enabling them to become part of this expanding network.

IDDA Awards is an annual event hosted by the Innovation and Digital Development Agency to recognise achievements pertaining to innovation. There are nine categories for the awards, including Startup of the Year and ICT Entrepreneur of the Year. The primary purpose of these awards is to recognise and support the most

promising innovators in the ecosystem, to encourage competition among those actively involved in the nation's innovation development, and to stimulate interest in the field. Anyone may apply for a nomination by submitting information that meets the category-specific criteria, as the application process is open to the public.

"Azerbaijani Cybersecurity Centre".

The Azerbaijan Cyber Security Centre was founded by the Ministry of Digital Development and Transport of the Republic of Azerbaijan in collaboration with the "Technion" Institute of Israel. Within three years, one thousand Azerbaijanis are expected to receive cyber security training at this centre. This initiative provides training in four areas to address Azerbaijan's paucity of personnel in the field of cyber security:

- specialised training for personnel;
- enlightening seminars;
- continuing education for senior cyber security professionals;
- product development and cybersecurity research.

During trainings, foreign educators impart both theoretical and practical knowledge concurrently in accordance with the Technion University's training programme. Six months of training are offered between 9:00 a.m. and 6:00 p.m. It is anticipated that each training period will produce sixty specialists. Those who effectively conclude the training receive a valid certificate from Technion University. Three categories of specialists will be instructed during the trainings: Red Team, Blue Team, and SOC Team. During training, twenty offensive, defensive, and analytical teams participate in simulations to refine their abilities.

"Relocation programme".

As a result of the global expansion of the ICT industry and the intensification of competition in this sector, the country's policies now include relocation programmes.

Consequently, the Relocation initiative has been active since 2022. The initiative was established in accordance with the local ecosystem development

strategies of the Agency for Innovation and Digital Development. The relocation programme offers foreign enterprises the following benefits:

- Organisation of efficient and prompt relocation;

- Simplifying the documentation procedure and providing support;

- Assist the company in ensuring its employees' housing and working conditions;

- Help obtaining a residence and employment authorization;

- Providing business structure and collaborating with venture capital industry representatives;

- Assisting with legal, financial, and bank account opening documentation;

- 24/7 assistance.

If the prerequisite conditions are met, innovative entrepreneurs and high-level specialists may petition for residency at the technopark.

"Technopark".

The Innovation and Digital Development Agency oversees the technopark application, evaluation, and residency approval processes.

The President of the Republic of Azerbaijan signed a number of ICT-related documents on December 30, 2022, mandating modifications to applicable laws and regulations and their implementation. The new modifications, which take effect on January 1, 2023, are applicable to both legal and natural technopark residents:

• Entities and individuals granted a valid residency permit by IRIA will enjoy the privileges listed below:

• Residents who engage in system integration or software development outside of the technology park are exempt from multiple taxes (income and profit tax, dividend, property, and land);

• Residents who engage in system integration and/or software development outside of a technopark are eligible for the following income tax breaks: 0% on the first 8,000 manats, 5% on the quantity over 8,000 manats for a period of seven years beginning on 01.01.2026, and 5% of the income;

• System integration and/or software development and development specialists from abroad who work outside of a technology park are not required to obtain a work permit.

• From January 1, 2023 to January 1, 2033, based on their preference, the mandatory state social insurance fee will be four times the minimum monthly salary, or from salaried work paid from the proceeds for employees of residents who work outside a technology park in the fields of system integration and (or) software development and development.

The goal of the initiative "Towards Digital Azerbaijan" is to increase digital literacy in the regions, develop ICT knowledge and skills, assess the region's current ICT potential, implement measures based on continuous monitoring, and provide development support. In the regional initiative presented by the Agency for Innovation and Digital Development on November 24, 2022, interest and experience in ICT in more than sixty Azerbaijani cities and regions will be analysed. In addition to bilateral meetings with executive bodies, relevant organisations, and institutions, it is intended to conduct educational and informative trainings for residents of the region who work in, study, or pursue a career in this field. One of the priorities of the initiative "Towards Digital Azerbaijan" is the training and employment of ICT specialists in their respective regions. Under the "Technest" Scholarship Programme, mentors and eminent educational institutions of the nation conduct trainings to introduce innovative future professions and coordinate interactive discussions during regional visits. Educational institutions administer on-site examinations to recruit candidates for the scholarship programme.

3.2. Policy instruments to stimulate entrepreneurship, their implementation, and coordination

The goals, strategies, format, and duration of efforts to promote the adoption of innovative initiatives should be primarily determined by the resource capacity of particular economic units and the community as a whole. Economic entities' innovation policies for implementing innovations are governed by the set of

objectives chosen and the strategies assumed for their implementation while promoting the execution of innovation projects.

1. The development of small and medium-sized enterprises is greatly aided by KOBIA. The Small and Medium Business Development Agency of the Republic of Azerbaijan (KOBIA) was founded by the President's Decree dated December 28, 2017. The Head of State's Decree of June 26, 2018, approved the Agency's statutes and organisational structure. The Agency is a public legal organisation that works under the Ministry of Economy to encourage the growth of small and medium-sized businesses (SMEs) in the nation, offers a range of services to SMEs, and coordinates and controls the services provided by state agencies in this area. The seven-member Supervisory Board is in charge of regulating the Agency's operations. The Minister of the Economy serves as the Chairman of the Agency's Board of Directors. A five-member administrative Board oversees the agency's operations at the present time. The organisation of the agency is detailed are [58].

- Office of the Small and Medium Business Development Agency of the Republic of Azerbaijan;
- Small and medium-sized businesses;
- Centres for the Development of Small and Medium-Sized Businesses;
- The Centre for the Development of State-Entrepreneur Partnerships;
- Funding for Small and Medium-Sized Businesses.

2. The organization's mission is described below [58].

– to participate in the regulation of small- and medium-sized business operations;

– to increase the importance of small and medium-sized businesses (SMEs) in the economy of the nation by putting in place a flexible management system and an efficient coordination mechanism that are common in this industry's international practises and meet current standards;

– improve the small- and medium-sized firms' particular weight and competitiveness;

– improve institutional support systems and SME access to financial resources;

– to coordinate the actions taken by public and private organisations in this regard;

– the formation of favourable conditions for regional entrepreneurial growth;

– to promote domestic and foreign investment in this area.

3. Additionally, one of the actions done to encourage the expansion of small and medium-sized businesses is the provision of state-guaranteed financing. Credit organisations are reimbursed for the shortfall at the cost of small business assistance funding. Small business loans are issued on favourable conditions. Small business assistance funds have the right to make up all or a portion of the income lost by credit institutions as a result of lending to small enterprises on a preferential basis. It is intended to provide business entities with loans totaling 500 million manats in accordance with the "Procedure of State Guarantee of Loans and Subsidisation of Loan Interests to Business Entities Operating in Freed-Occupied Territories," which was approved by President Ilham Aliyev's decree on January 9, 2023. The state will provide a 90% guarantee on these loans, or 450 million manats. State-guaranteed loans have a maximum annual interest rate of 15% and a maximum loan period of 7 years. The state won't provide a loan guarantee if the project isn't carried out in occupied territory, the business entity's accounts are under a proper order, the business entity is a member of the authorised credit organisation requesting the guarantee, or the business entity is being criminally investigated for failure to pay taxes or insurance premiums. This law states that even if the state's share of the corporate entity's authorised capital surpasses 50%, it will not guarantee the loan [49].

4. As another approach to promote small and medium-sized businesses, "Innovative Business Incubators" might be considered. According to the order No. 128,6 of the Scientific Board of the Azerbaijan State Economic University, dated April 29, 2014, the "Innovative Business-Incubator" was founded. On May 20, 2014, it was registered with the Ministry of Taxes of the Republic of Azerbaijan. Innovative Business Incubators" serve the following purposes [47]:

- assuming responsibility for the construction of youth-focused business and IT incubators in higher education institutions that prepare students for relevant credentials under the umbrella of the government's "Azerbaijani Youth in 2011-2015" project;

- improving UNEC faculty and staff members' social welfare by incorporating them in cutting-edge educational and scientific activities;

- developing the abilities of young managers and business owners and offering financial, logistical, psychological, and educational assistance for the launch of their ventures.

5. The plans for Azerbaijan's new free trade zone, which will be called the Alat Free Economic Zone, which will be part of the growing commercial and logistics hub in the Alat settlement on the Caspian Sea coast, have just been made public [50].

6. Ilham Aliyev, the president of Azerbaijan, signed a proclamation on May 22 that addressed the creation of a new free trade zone and the management of the zone's operations. In addition, the decree deals with the creation of the zone's authorised authority and the dismantling of the interim administration that had been in existence for the preceding two years. The decree calls for the documentation of the lands located in the newly created free economic zone's administrative territory, which is located 65 kilometres south of Baku's capital city on the administrative territory of the Garadagh district. A part of its administrative region is the hamlet of Alat. The territory that has been authorised for its use must now be included in the Alat Free Economic Zone, according to instructions given to the Baku International Sea Trade Port, which is located in the Alat settlement and is the largest port on the Caspian Sea [47].

7. The Azerbaijani Parliament, the Milli Mejlis, adopted the law governing the Alat free economic zone on May 18, 2018. According to the report, the creation of the free zone would promote a range of business activities, as well as investments and development projects in the region surrounding the Alat community [47].

8. For companies operating inside the free economic zone, the Act provides a special tax and customs policy that will be put into effect. In accordance with the

document, no value-added tax will be levied on any goods, services, or labour carried into the zone, and there won't be any associated costs for customs clearance either. Nevertheless, when these goods are exported from the free zone to the mainland economy, the fundamental economic law's criteria will be put into effect. Leaving the free zone causes this to happen [48].

The whole turnover that is expected to be produced in the free economic zone through the provision of goods, the rendering of services, and the completion of construction will be subject to a 0.5 percent tax. In the meantime, all taxes associated with the activities that they carry out are exempt from payment for the free zone's authorities, administrative enterprises, legal bodies functioning there, their employees, and its residents.

Any nationalisation, expropriation, or other limitations on private property that the government may impose are not applicable to legally running firms in the free zone. The right to invest in the free zone and the freedom to transfer profits from business activities carried out outside the free zone are accorded to investors, shareholders, residents of the free zone, and legal entities, as well as the employees of such companies. They also have the basic right to labour and do business in any foreign currency of their choice.

There are no restrictions on the capacity of foreign individuals or legal entities to own a company's whole charter capital or to invest in companies that are based in the free zone.

In the interim, a Business Services Centre that will shortly be established in the Alat Free Economic Zone will be able to provide licences, visas, and a variety of other official documents.

The Alat village is now undergoing significant development under the control of the Azerbaijani government. The government of Azerbaijan has ambitions to build a significant economic centre in Alat that would connect Europe and Asia with crucial infrastructure including a port, global logistics hubs, and an airport. The proposed East-West and North-South intercontinental routes in Alat coincide with road and rail transportation lines.

The most advanced building in the Alat community at the moment is the Baku International Sea Trade Port, also known as just the Port of Baku. Even though construction is currently going on there, the port is still open. The initial stage of development is this one. At its present capacity, the largest port on the Caspian Sea can handle up to 15 million tonnes of cargo and 10,000 twenty-equivalent units (TEU) annually. The port will have the ability to process 25 million tonnes of cargo in addition to 500,000 TEU once the second phase of development is complete. https://portofbaku.com/

The establishment of a stimulating tax system through the implementation of taxation mechanisms for scientific-research and experimental-constructive works is the foundation of innovation development, according to an analysis of indirect methods for encouraging the implementation of innovation projects abroad. The ideas and strategies employed by state authorities when implementing policies to support innovation processes abroad are quite significant. According to experts, the following strategies will best serve the demands of the Azerbaijani economy: https://president.az/en/articles/view/50474

1) Deductions from profits for spending on experimental construction and scientific research;

2) Reducing the profit deduction rate;

3) Stimulation through a depreciation plan.

According to worldwide experience, a variety of state stimulation techniques are frequently utilised to make it easier for creative projects to be carried out in order to achieve national interests. According to the experience of other countries, the state's dominant position in the scientific and technological market, in setting national priorities, and by the state's active influence on the process of innovation development via the system of stimulation mechanisms all contribute to the economy's high level of activity. Two economic problems that the state is facing should be resolved with the help of the system for incentivizing the implementation of innovation projects: the general activation of innovation application and the improvement of the competitiveness of high-tech sectors of the economy, taking into

account their potential access to the global market. In other words, as interest in inventive activity increases, so does interest in the economic growth of the locality. The mechanism that fosters excitement for the implementation of new ideas is changes in the competitiveness and profitability of commodities at various phases of scientific and technical development. This shows that businesspeople who adopt new technologies and scientific advancements first may produce goods with higher quality and lower costs after the first cost increase.

3.3. Challenges and problems in fostering innovative development in Azerbaijan

In order to assess the current state of innovation in entrepreneurship in our country and to determine directions for improvement, a survey was conducted among employees of small and medium-sized enterprises as a practical part. The survey was created using a Google Form and respondents were sent a Google Form link for participation. The link was sent to 182 SME employees, of which 144 responded and 112 of the 144 confirmed their participation in the survey. When the number of answers to the survey reached 100, the acceptance of the answers was stopped and the processing and interpretation of the results began.

The total number of questions asked to the respondents was 20. These questions are classified into 3 main sections:

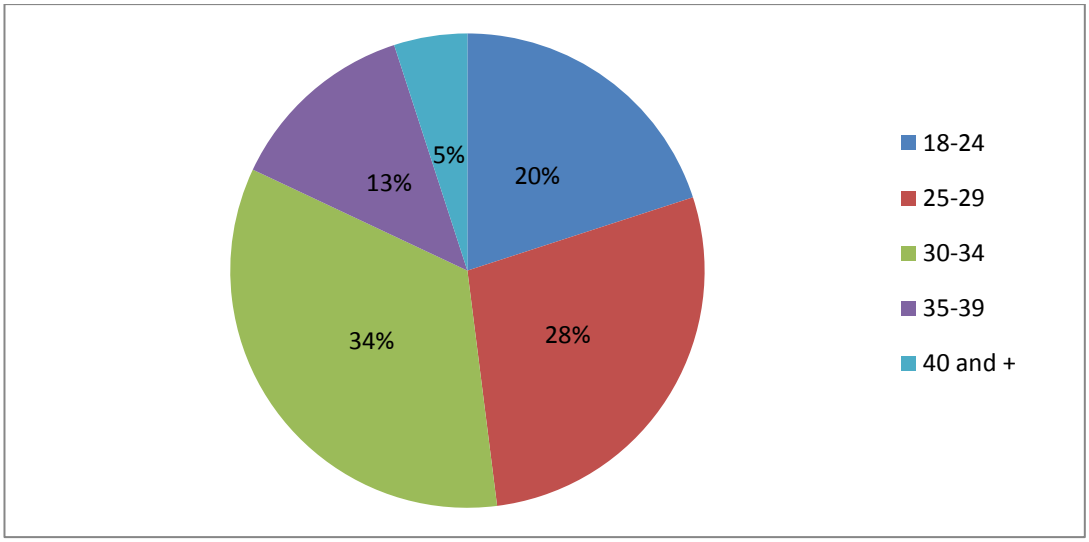
- demographic questions;
- closed type questions;
- Likert-type questions and arguments.

In general, when the link was sent to the respondents, they were informed that their participation in the survey would be confidential and anonymous. The parameters of the survey were set in such a way that the e-mail addresses of the respondents were not collected.

Each of the questions were starred questions, meaning respondents had to answer all questions or the survey could not be completed.

The first 4 questions were presented in order to clarify the respondents' age groups, gender, monthly income and spheres of work. Let's consider the results.

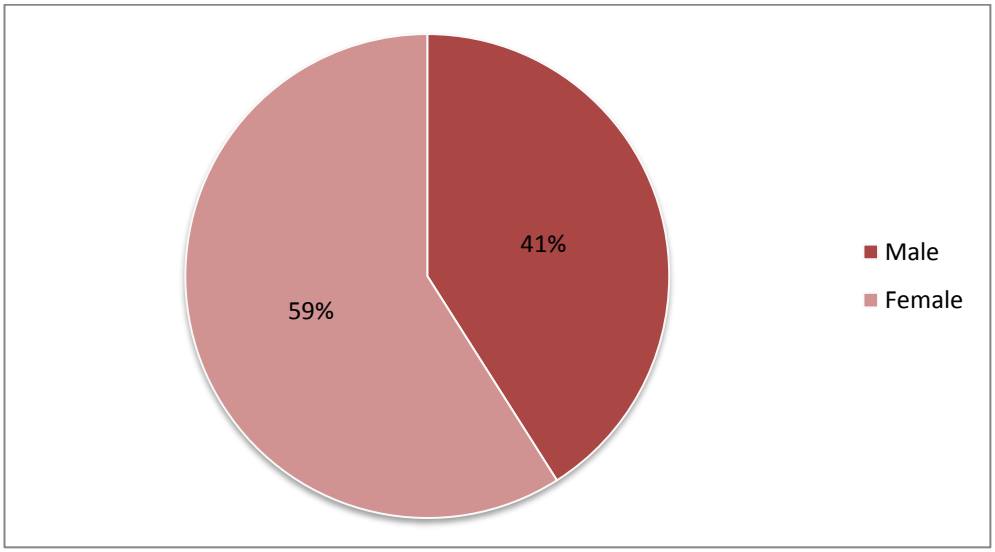
Chart 3.3.1: The demographic profile of respondents – age groups, %



Source: survey results from the Google Form.

20% of respondents were in the 18-24 age group. The 25-29 age group made up 28% of respondents. The largest group was the 30-34 age range, comprising 34% of respondents. The 35-39 age group represented 13% of the sample, and only 5% of respondents were aged 40 and above.

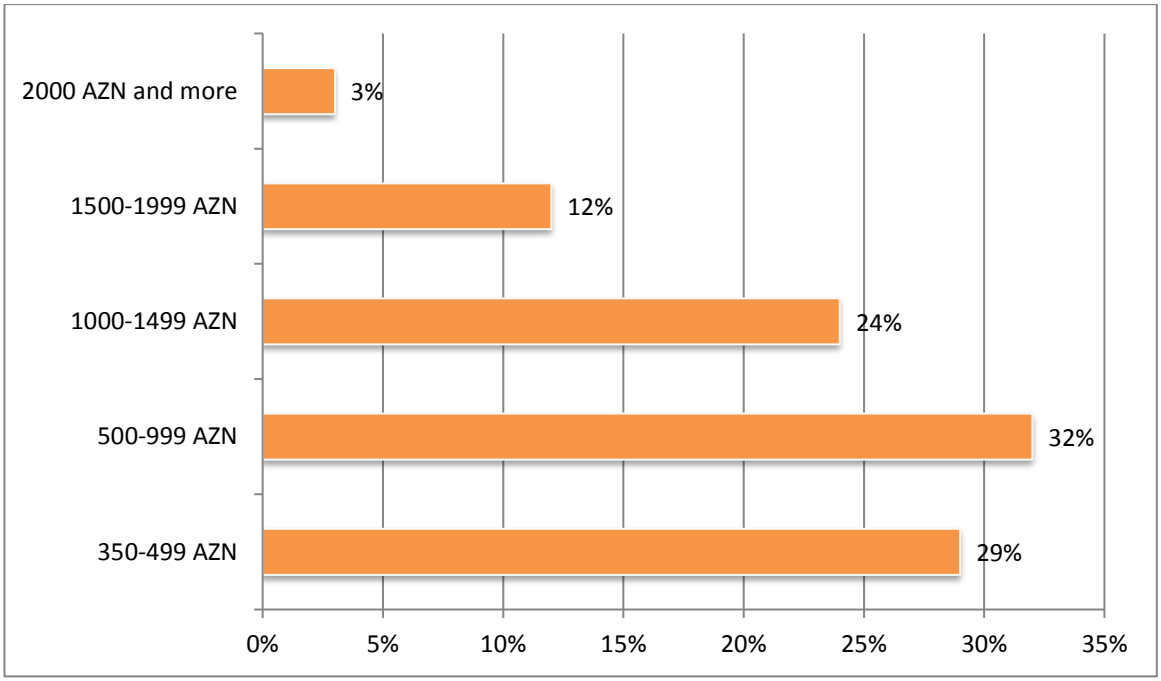
Chart 3.3.2: The demographic profile of respondents – gender, %



Source: survey results from the Google Form.

As it is seen, 41% of the respondents were males and 59% were females.

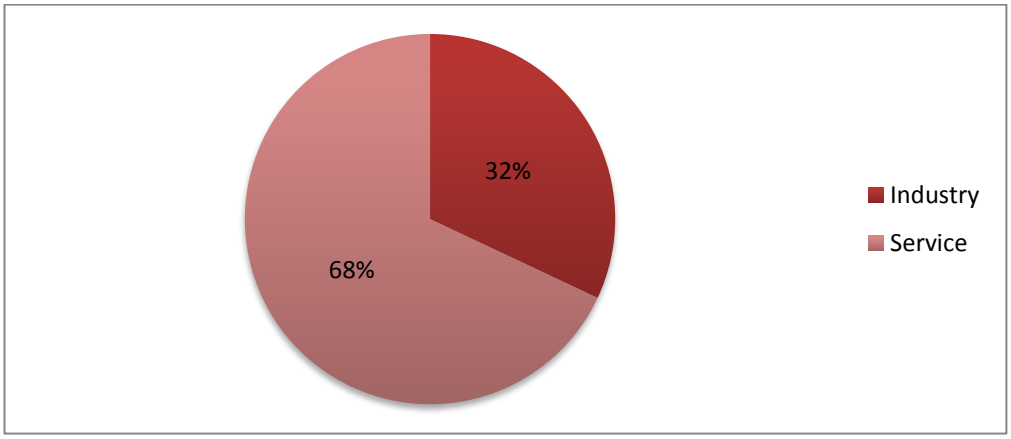
Graph 3.3.1: The demographic profile of respondents – The income groups, %.



Source: survey results from the Google Form.

29% of respondents earn between 350-499 AZN. The largest group is those earning between 500-999 AZN, which comprises 32% of respondents. 24% of respondents have an income between 1000-1499 AZN. Respondents with income levels between 1500-1999 AZN make up 12% of the group. Lastly, only 3% of respondents earn 2000 AZN or more.

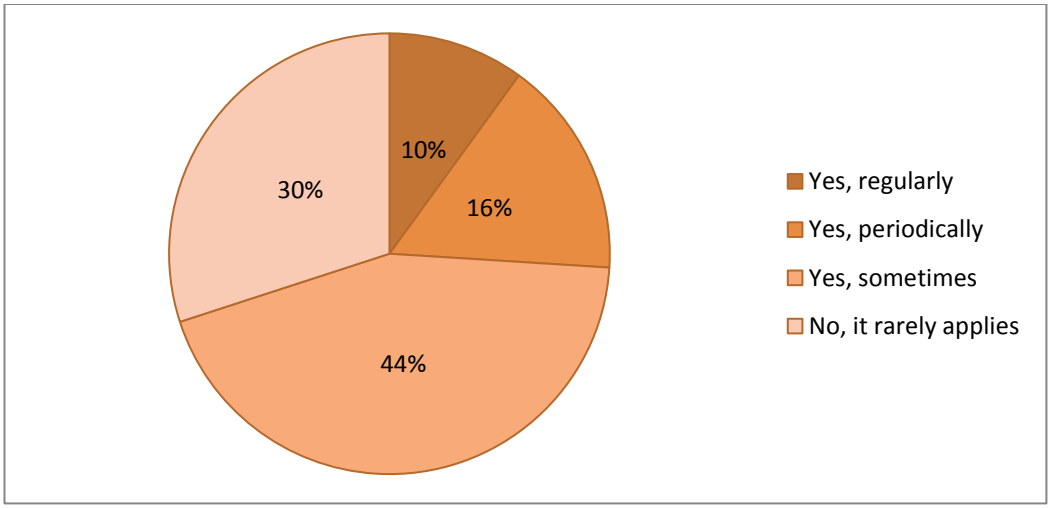
Chart 3.3.3: The demographic profile of respondents –sphere of activity



Source: survey results from the Google Form.

As it is seen, the 68% of the respondents work at service companies. Although the rapid development of the service sector in our country looks like a positive trend, in fact, this growth of the service sector is due to the oil industry, and unfortunately, the risk remains high unless the non-oil industries are developed. Thus, the service sector faces a significant impact on the smallest fluctuations.

Chart 3.3.4: Does your company apply new technologies to the work process?, %

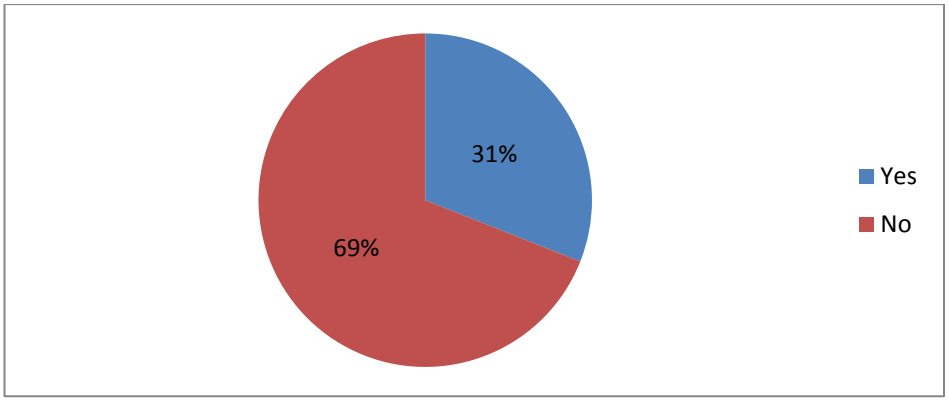


Source: survey results from the Google Form.

It can be interpreted that a total of 70% of respondents indicated that their companies do apply new technologies to the work process in varying degrees. This includes 10% of respondents whose companies regularly apply new technologies, 16% where new technologies are applied periodically, and 44% where they are used sometimes. On the other hand, 30% of respondents stated that their companies rarely apply new technologies to the work process.

As we can see, companies do not apply innovative activities as often as large companies, but they do not stay out of market challenges and trends.

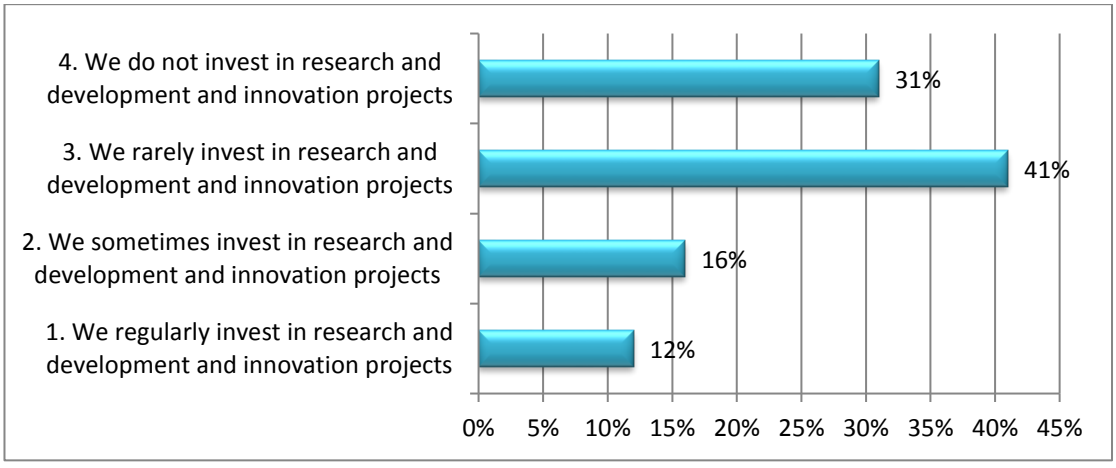
Chart 3.3.5: Does your company have a separate branch or department responsible for innovation? (Percentage of respondents)



Source: survey results from the Google Form.

Apparently, 69% of the respondents stated that there is no separate branch or department for innovation in their company. Of course, in small and medium-sized companies, sometimes it is not practical to give place to innovation because the company structure is limited, but I think that if companies allocate at least one structural unit for innovation, it will enable companies to make progress in innovation. So, instead of a universal department or an employee dealing with innovative activity, if a whole department focuses on it, it will work more systematically and more optimal results will be achieved.

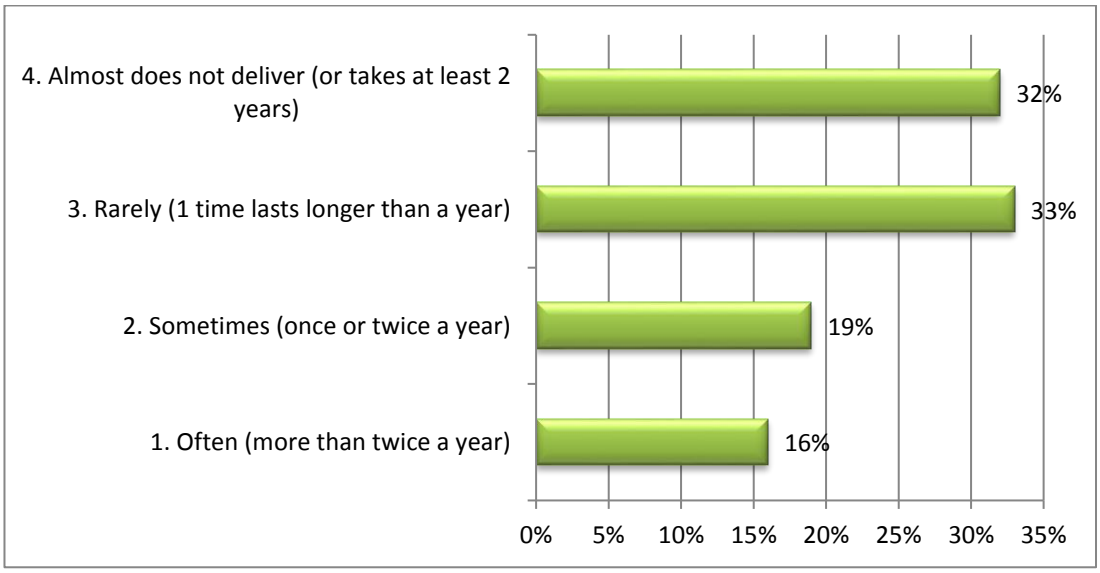
Graph 3.3.2: Which of the following best describes your company's approach to innovation? (Percentage of respondents)



Source: survey results from the Google Form.

Apparently, 41% of respondents rarely invest in research and development and innovation projects, while 31% of respondents indicated that they do not invest in this direction as a company at all. Of course, this is a negative situation and indicates that small and medium-sized companies do not build the right strategies to adapt to market competition, and the products and services they produce are not at all innovative.

Graph 3.3.3: How often does your company introduce new products or services? (Percentage of respondents)



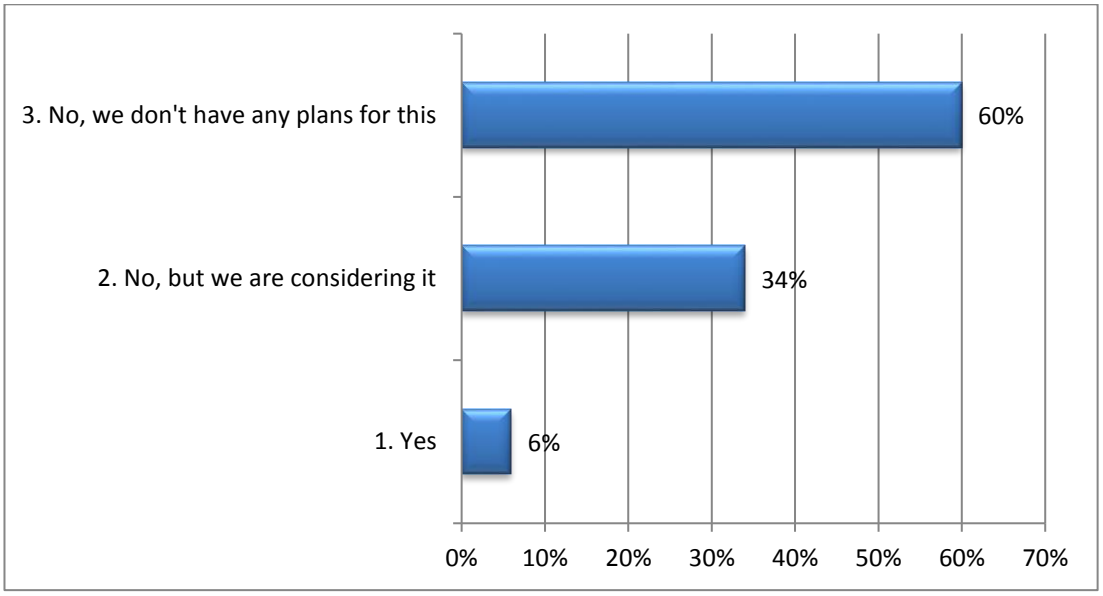
Source: survey results from the Google Form.

As we can see, 33% of the respondents said that the introduction of a new product or service takes longer than a year, and 32% of the respondents said that it takes even longer than 2 years. Launching a new product or service once a year is not an underperformance for an SME, but a delay of more than a year puts the company far behind the competition.

We asked respondents whether their company had invested in digital transformation in the past year. 33% of respondents said that they have no plans for this yet. From here, we come to the conclusion that most of the companies have not yet included innovative activities in their organizational action plans.

The 10th question to the respondents was "How do you usually react as a company to a failed innovation project?" the question was asked. 45% of the respondents stated that their motivation has decreased and they will not try risky projects next time. 29% of respondents stated that they do not undertake projects with a high risk of failure. Of course, small and medium-sized enterprises often do not have such high capital to invest in risky projects. However, instead of demotivating and giving up on them, it would be more appropriate to gain experience and share risks in the future.

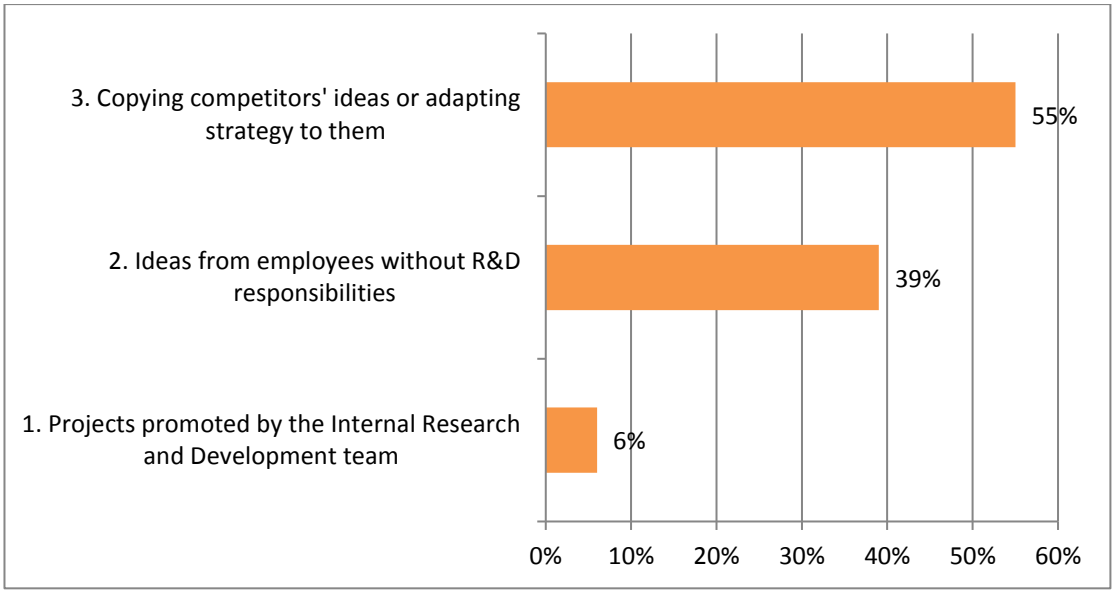
Graph 3.3.4: Do you collaborate with external partners (eg universities, research institutes, other companies) for innovation activities? (Percentage of respondents)



Source: survey results from the Google Form.

Apparently, 60% of the respondents stated that they have no plans for cooperation with foreign partners. Of course, this is not such an important factor. However, I believe that if internal staff and the innovation team are unable to advance the company's innovation strategy, external partners should be sought for assistance.

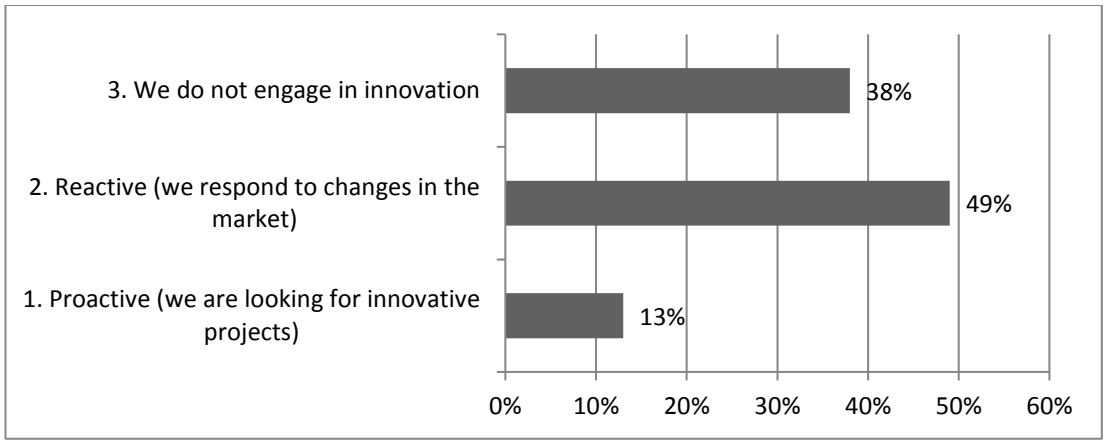
Graph 3.3.5: What is your company's main source of innovative ideas? (Percentage of respondents)



Source: survey results from the Google Form.

Apparently, 55% of the respondents indicated that their company's main source of innovative ideas is the choice of copying or adapting their strategies from competitors. Apparently, companies are rushing to the easy way out, which is hindering their progress. In addition, copying an idea carries risks that may result in a number of legal problems, which may call into question the activities of companies.

Graph 3.3.6: Which best describes your company's current approach to innovation? (Percentage of respondents)



Source: survey results from the Google Form.

As it can be seen, 49% of the respondents stated that they exhibit a reactive approach, that is, they try to respond more to market changes. Of course, there is only one way to stay competitive when there is no place for innovative projects - that is to respond flexibly to changes in market conditions and challenges.

After that, Likert-type questions were addressed to the respondents.

The questions were in the form of arguments and it was possible to answer on a 5-point scale (1 - strongly disagree, 5 - strongly agree). The arguments were as follows:

14) Innovations significantly affect the activity of our enterprise.

15) Innovative projects usually bring good profit to our enterprise.

16) The management of our enterprise supports innovative ideas and proposals.

17) We have enough resources (time, money, equipment) to implement innovative projects.

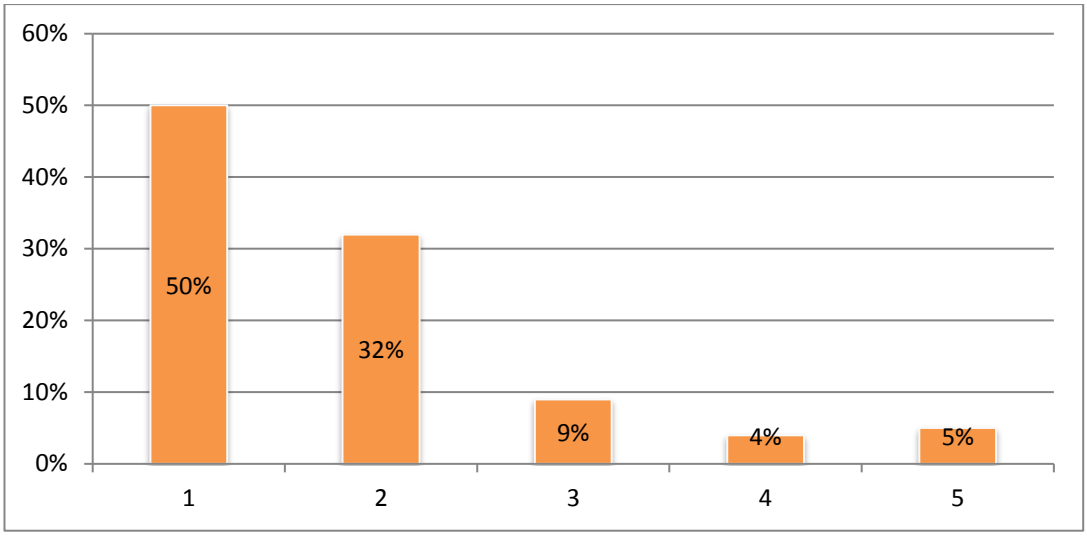
18) Our company encourages employees to make suggestions for improving processes or introducing new technologies.

19) We actively use data to make business decisions in our enterprise.

20) We constantly update our products and services to be competitive in the market.

Let's review the answers.

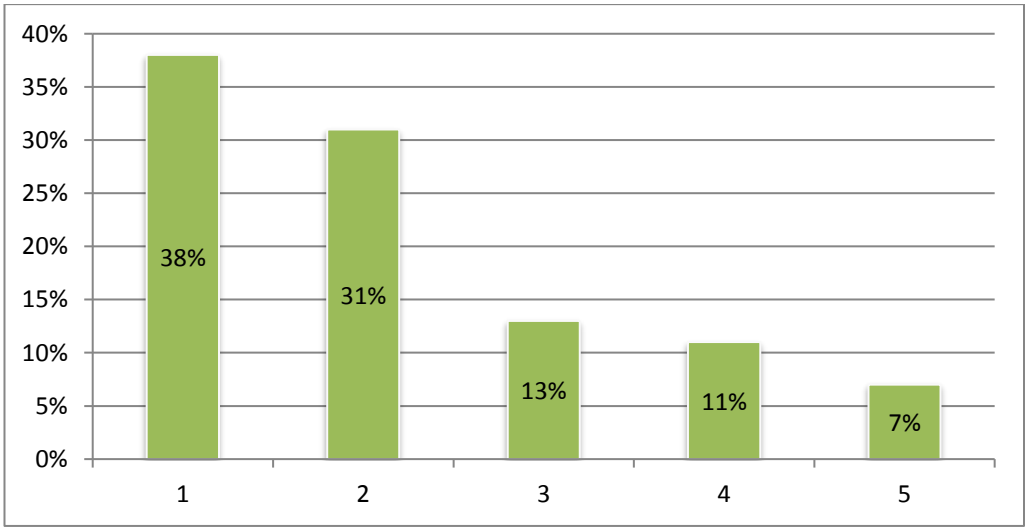
Graph 3.3.7: Innovations significantly affect the activity of our enterprise. (% of respondents)



Source: survey results from the Google Form.

Apparently, 50% completely deny that innovation has significantly improved their company's activities. Of course, this is due to infrequent engagement in innovative activities and not choosing the right strategies.

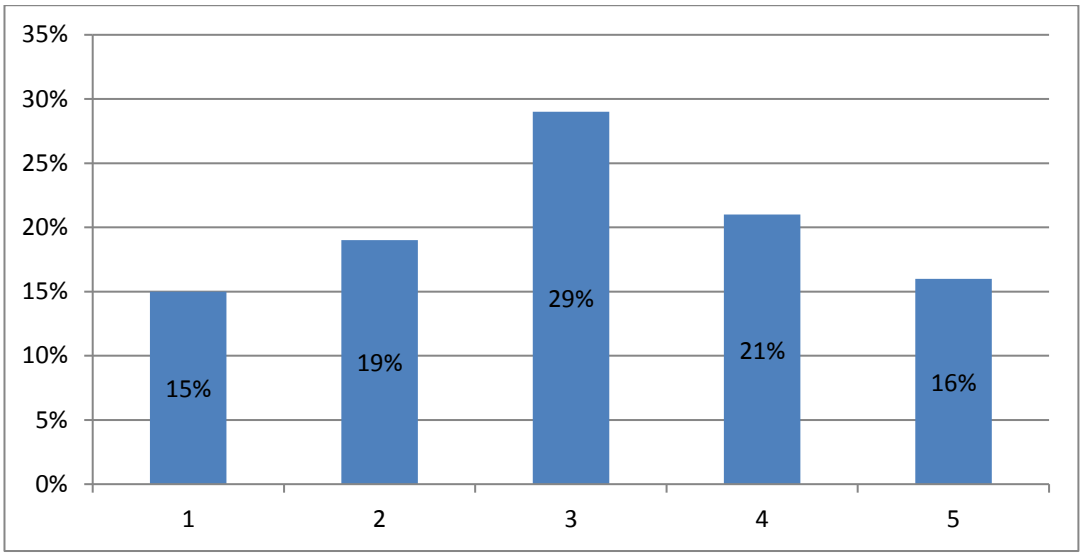
Graph 3.3.8: Innovative projects usually bring good profit to our enterprise. (Percentage of respondents)



Source: survey results from the Google Form.

Apparently, 69% of respondents do not agree with the idea that innovation brings good profits to the company. This is because most of them either do not invest in high-risk projects or withdraw once they fail. Of course, if there is no risk, it is absurd to talk about high income.

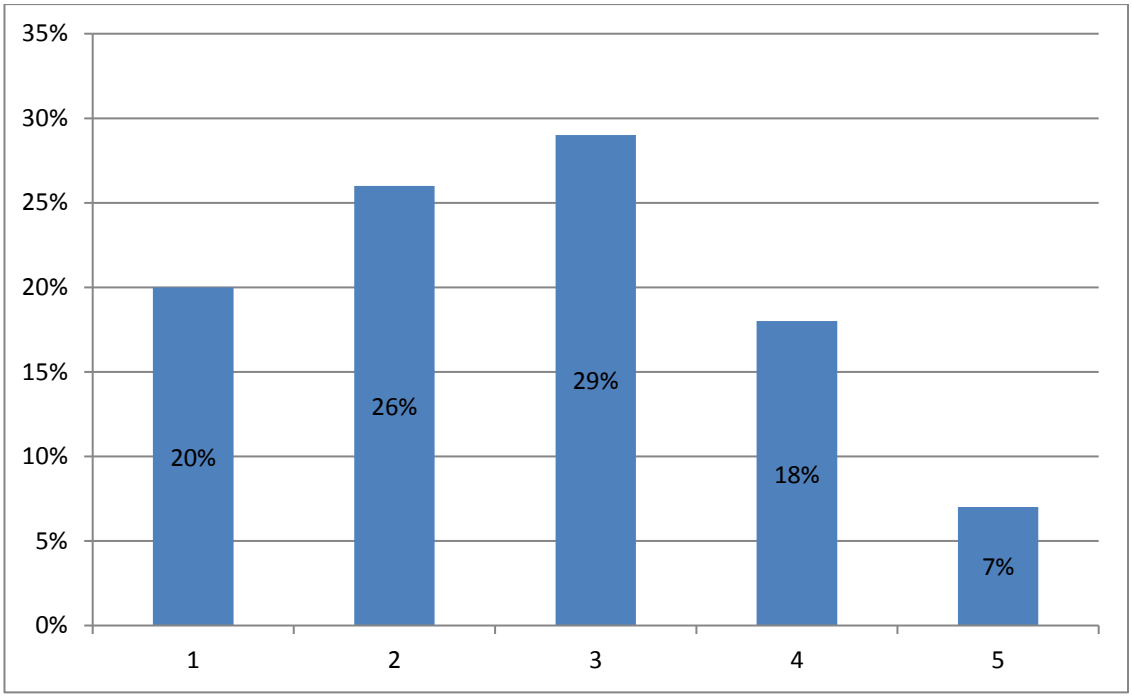
Graph 3.3.9: The management of our enterprise supports innovative ideas and proposals. (Percentage of respondents)



Source: survey results from the Google Form.

Although 29% of respondents expressed a neutral position on the idea that management should support innovative ideas and suggestions of employees, 37% of respondents agreed with this opinion. From here, it is concluded that certain conditions are created by the management, but due to gaps in management, the opportunities created are not equally distributed among employees, which leads to inefficiency in innovative activities.

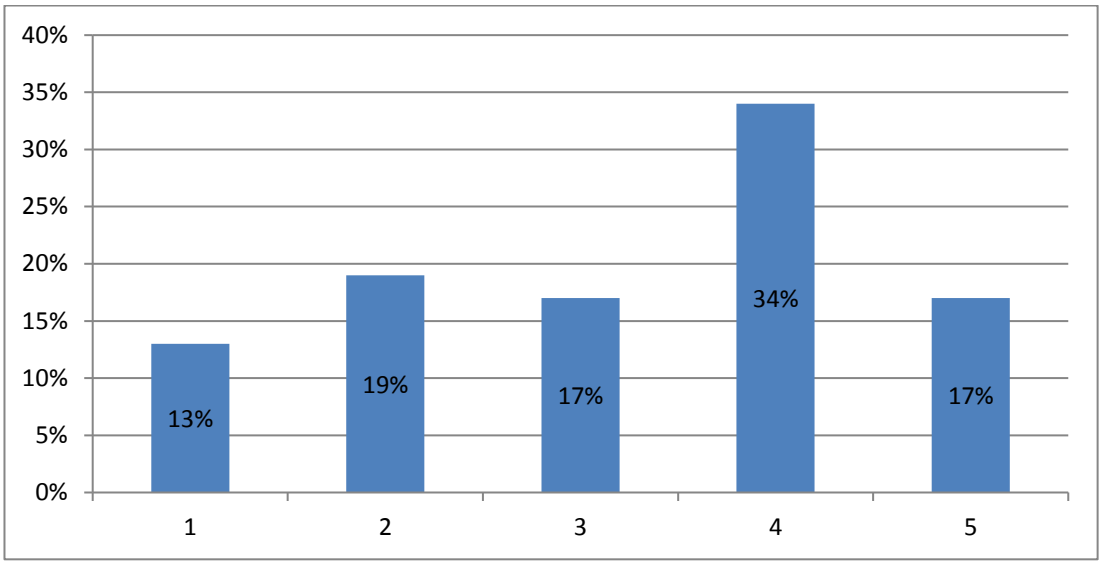
Graph 3.3.10: We have enough resources (time, money, equipment) to implement innovative projects. (Percentage of respondents)



Source: survey results from the Google Form.

46% of respondents do not agree with the idea that they have enough resources for innovation. Of course, it is understandable that although many projects related to small and medium entrepreneurship support are implemented and steps are taken in our country, most of them still have problems with access to capital and therefore their capital is low. When the capital index of the company is low, of course, the potential opportunities for innovation are low.

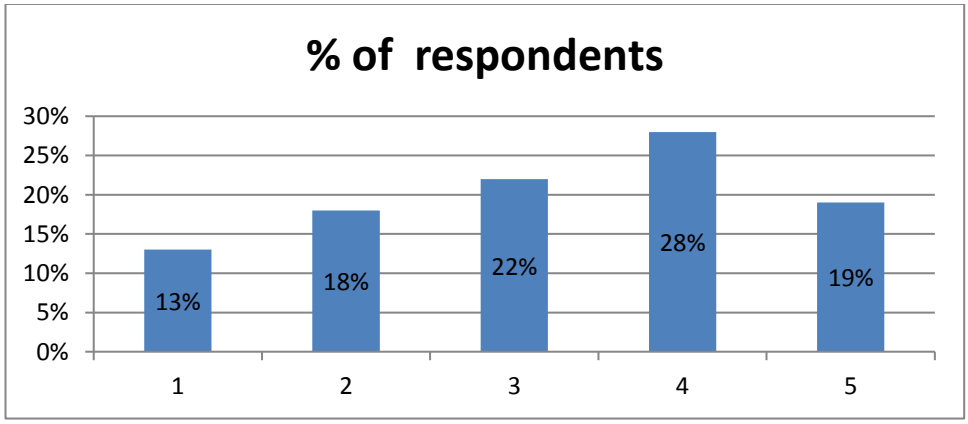
Graph 3.3.11: Our company encourages employees to make suggestions for improving processes or introducing new technologies. (Percentage of respondents)



Source: survey results from the Google Form.

In the company, it is especially positive that the management motivates employees for innovative ideas and suggestions. Usually, management can achieve this through various material and non-material motivational methods. Holding competitions with priorities such as awarding the most creative among ideas is one of the successful strategies in this direction.

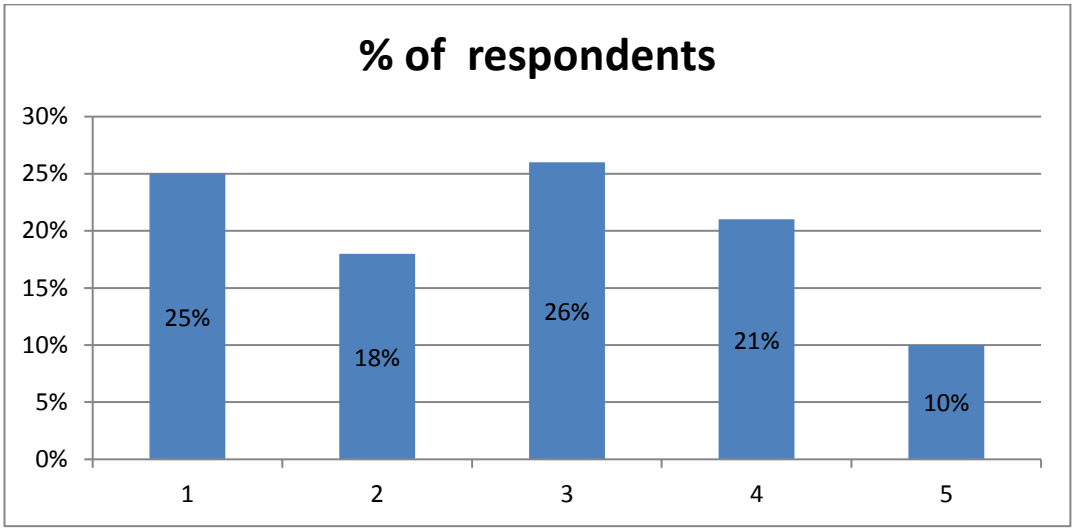
Graph 3.3.12: We actively use data to make business decisions in our enterprise.



Source: survey results from the Google Form.

It seems that most companies are actively using data to make business decisions, which is a positive thing.

Graph 3.3.13: We constantly update our products and services to be competitive in the market.



Source: survey results from the Google Form.

Finally, approximately equal numbers of respondents gave positive and negative answers to the idea that they regularly update their products and services in order to be competitive in the market.

3.4. The impact of COVID-19 on the country's innovation activity

The demand for products and services among consumers has decreased as a result of the coronavirus-related quarantines enforced in several nations. This has also slowed down activity in the manufacturing and logistics chains and is expected to produce a worldwide recession that will increase unemployment. The actions implemented in response to the coronavirus have had a detrimental impact on many enterprises and industries, while e-commerce, on the other hand, has had a favourable impact. Consumers are concentrating on using online purchasing websites to fulfil their demands due to the quarantine system, social isolation policies, and individuals avoiding physical interaction. The coronavirus has expedited digitalization and

induced a change in consumer behaviour from brick-and-mortar businesses to online retailers.

Despite the virus' quick spread, internet work has begun in Azerbaijan and many other nations, and as a result, widespread usage of digital media has been achieved. People began utilising e-commerce and internet purchasing more frequently as the virus spread more widely in public settings. Since the digital platform offers a contactless service, the chance of contracting an infection is also reduced. Additionally, purchasing a product directly, without making physical touch, provides benefits for both time and energy usage in addition to health.

9. Under the circumstances of the coronavirus pandemic in Azerbaijan, immediately adaptable assistance programmes and new tools to assist business owners were developed. This was done while considering the economic impact of the pandemic into consideration. These mechanisms include financial support, tax advantages and holidays, enhancements to preferential lending through the Entrepreneurial Development Fund, and other initiatives of a similar nature. In addition, as a continuation of the assistance measures, the nation has been provided with a unique tax system, and the hazards previously associated with their operations have been substantially reduced. In light of the pandemic, the system of financing has been bolstered to better facilitate the expansion of entrepreneurial endeavours and manufacturing (https://president.az/az/articles/view/38706).

10. As a consequence, an entirely new method of loan disbursement was devised, and state-backed accelerated loans were made available. In regions that require long-term investments in agriculture, the loan term has been increased by two years; the small loan term has increased from three to five years, and the medium loan term has increased from five to seven years. In order to make it easier for business owners to secure loans, the petition options available to them have been expanded, and they now have the option of pledging newly acquired equipment as collateral. This modification was made to facilitate their access to financing (https://president.az/az/articles/view/38706).

1. A business owner can now obtain a loan from multiple institutions for a maximum term of three years and a maximum quantity of three million manats. Additionally, the state subsidises the interest on these loans, which means that the state pays half of the interest rather than the business proprietor. The loan may include a grace period of up to one year, during which the business is solely responsible for paying the loan's interest. This is a significant financial boost that will aid the progress of the entrepreneur. Moreover, the business proprietor can apply for the loan from the comfort of their own residence. Electronic documents are used to disseminate loans, and a resource known as the Electronic Credit Platform has been developed specifically for this purpose. This method, which is utilised in Azerbaijan, enables business owners to obtain loans in a manner that is straightforward, convenient, and subject to public scrutiny (https://azertag.az/xeber/Sahibkarligin_stimullasdirilmasi_yerli_istehsala_destek_iqtisadi_hedefler-1530537).

3.5. Strengthening innovation policies for sustainable development

The government may encourage business and academic collaboration by funding joint research initiatives, hosting innovation competitions, and providing networking opportunities. These initiatives might strengthen ties between academia and business, foster the sharing of knowledge, and support an innovative culture in Azerbaijan.

- Promote the protection of intellectual property rights:

The next action the Azerbaijani government may take to enhance the inventive efforts of the National Chief Information Officer (CIO) is to promote intellectual property rights. In order to promote the commercialization of innovative products and services and draw investment to the innovation sector, intellectual property rights (IPR) must be protected.

The government may promote IPR protection by enacting and upholding legislation that protects inventors' rights. Among the relevant laws are patents,

trademarks, copyrights, and trade secrets. The government may also provide training and education on IPR protection to business owners, academics, and industry leaders.

The government may encourage technical transfer in addition to defending intellectual property rights. Technology transfer is the process of moving products of research and development from the lab to the marketplace. The government may promote the creation of technology transfer offices, fund research and development, and increase industry-academia collaboration to promote knowledge transfer.

The government may also promote innovation by providing loans to entrepreneurs and enterprises. Grants, loans, and tax incentives might all be used to achieve this. Additionally, the government can establish venture capital funds to aid innovative businesses.

Finally, the government might support a regulatory system that encourages innovation. For creative enterprises, this can mean reducing administrative red tape and simplifying regulatory procedures. Additionally, the government may pass legislation that promotes the growth of the innovation sector and provides a clear legal framework for creative endeavours.

- Create a competent workforce:

The next action the Azerbaijani government may take to support the creative work of the National Chief Information Officer (CIO) is to develop a trained workforce. To promote innovation in Azerbaijan and give the country the human capital it needs to compete in the global economy, a skilled labour force must be developed.

In order to develop a bright and creative workforce, the government may make investments in education and training programmes. These might include initiatives to increase the number of STEM graduates, career training programmes, and entrepreneurial instruction. Additionally, students who want to pursue education and training in fields related to innovation may be eligible for financial help and scholarships from the government.

In order to promote an innovative culture, the government may also help with the establishment of innovation centres, hackathons, and other initiatives. These

gatherings might provide aspiring businesspeople and innovators with funding, mentorship, and networking possibilities.

In addition to promoting education and training, the government can also promote inclusion and diversity in the innovation sector. This may be done by offering resources and support to groups like women, minorities, and people with disabilities, as well as by encouraging them to participate in creative activities.

Last but not least, the government may work with the business community to determine the knowledge and skills needed to promote innovation and to offer training and education programmes that are particularly suited to those requirements. This may help to ensure that the workforce have the abilities needed to foster innovation and participate in the global economy.

- Create a supportive regulatory environment:

The next action the government of Azerbaijan may do to support the creative initiatives of the National Chief Information Officer (CIO) is to promote international collaboration. Access to new markets, technologies, and resources may be made possible through international cooperation, which would encourage innovation in Azerbaijan.

To encourage collaboration and information sharing, the government may enter into agreements with foreign countries, academic institutions, and research organisations. Initiatives for joint research and development, student exchanges, and collaboration on legislative and regulatory frameworks are a few examples.

In order to promote Azerbaijan's capacity for innovation and forge relationships with potential partners and investors, the government may also participate in international forums and conferences. This might help promote Azerbaijan's creative skills and draw in funding and partnerships.

Additionally, the government may provide funding and assistance for international programmes and projects that have an emphasis on innovation. In addition to funding for academics and researchers to attend international conferences and collaborate on research projects, this may also include funding for businesses and entrepreneurs to participate in international accelerators and incubators.

The government can also make an effort to improve the business environment for foreign companies and investors who are considering investing in Azerbaijan's innovation industry. This might entail offering tax breaks, easing administrative procedures, and supporting foreign businesses looking to establish a presence in Azerbaijan.

The Azerbaijani government may take a proactive stance towards fostering innovation by making investments in education and training, encouraging collaboration between business and academia, and creating a welcoming regulatory environment. These actions might help Azerbaijan become a regional and international innovator leader.

In order to encourage and enhance small and medium enterprise in the area of innovation in Azerbaijan, various important routes should be taken. I believe that by concentrating on these areas, the nation can provide a setting that promotes innovation, supports the expansion of SMEs, and eventually helps to build a more varied and resilient economy.

Therefore, firstly, I think that in order to promote SMEs, tailored government policies and incentives must be developed and put into place. This might involve creating favourable regulatory environments that support entrepreneurship and lower administrative barriers, as well as tax credits, grants, and subsidies to promote research and development.

Second, I believe that SMEs must have better access to finance and resources if they are to undertake creative ideas and expand their businesses. This might entail the development of specialised financial tools, such as venture capital funds that focus on innovation, as well as the promotion of alliances with bigger businesses and research organisations that can offer access to resources and knowledge.

Thirdly, I think that in order to encourage innovation inside SMEs, it is essential to develop a culture of cooperation and information sharing. Azerbaijan is developing innovation centres, incubators, and accelerators to provide places where business owners, academics, and experts from the sector may meet and exchange

ideas, work together on projects, and come up with novel solutions to urgent problems.

Additionally, I believe that spending money on education and capacity building is crucial to developing a knowledgeable and flexible workforce that can spur innovation among SMEs. Azerbaijan can provide its people the information and abilities required to thrive in the innovation-driven economy by boosting STEM education, entrepreneurial training, and lifelong learning opportunities.

Finally, I believe it is critical for Azerbaijan to give SMEs' responsible and sustainable development in the area of innovation top priority. The nation can make sure that its support for SMEs contributes to a more just and sustainable future for everybody by taking into account the social, environmental, and economic effects of innovative ideas and technology.

I believe that Azerbaijan can effectively support and improve small and medium entrepreneurship in the area of innovation and contribute to the country's overall economic growth and prosperity by focusing on these key directions: targeted government policies and incentives, improved access to funding and resources, fostering a culture of collaboration, investing in education and capacity building, and prioritising responsible and sustainable development.

CONCLUSION

As a result, following the investigation, we may draw the following conclusions:

1) An innovation activity is a type of activity that entails acquiring or transforming the results of scientific research and development, as well as scientific advancements, in order to produce a new or improved technological product applied to the market, or a new or improved production process with the acquisition of the corresponding advantage. One of the most crucial elements for the successful upkeep and expansion of organisations is innovation. The professional actions of those involved in this industry, including businesses, research institutions, and universities, as well as their contacts on a local, national, and international level, have a significant impact on the efficiency of the innovation process. The conditions that motivate individuals and enterprises to learn, the stability of the financial system, and the efficacy of state regulation in this area are, on the other hand, factors that affect the success of the innovation system.

2) An innovation project is created using the innovation activity. The project as a whole is a difficult, once-in-a-lifetime event that is limited by time, money, and resources, and if it were to be executed, it would necessitate the use of a new one created at the customer's request. The life cycle of the project includes each stage of its creation, starting with idea generation, ETTKI implementation, production setup, and product manufacture.

3) It is necessary, in our opinion, to create a framework for the assessment and selection of new projects. According to our opinion, this approach should include a multi-level system for creating an integrated indicator of an innovation project, with each evaluation level including the aim indicators listed below:

- The initiative's originality. The usefulness and uniqueness of the project are described here as determined by competitiveness criteria like "importance of technical decision" and "importance of economic event."

- The proposal's capacity to make money. It outlines the project's financial significance, production effectiveness, and sales effectiveness. Net discounted income, maturity, as well as elements related to innovativeness and commercialization, influence this level.

4) It is crucial to evaluate a range of internal and external factors that may have an impact on an innovation activity's efficacy while developing innovation efforts. The proposed project's feasibility is influenced by technical, commercial, institutional, social, environmental, financial, and economic factors. Because there are many different approaches to distributing resources and achieving goals, it is necessary to analyse these factors that influence the project's outcomes.

5) The main guidelines for fostering an atmosphere that will support the creative expansion of the economy are as follows:

The creation of a productive industrial sector via the upgrading of industrial businesses' technical and technological infrastructure;

- the promotion and growth of creative activity in the entrepreneurial sector, which entails balancing the goals of investors with the execution of relevant governmental policies;

- the creation of tax incentives to encourage the adoption of technologies and the expansion of high-tech businesses;

The creation of an innovative institutional environment through the abolition of variation in regulatory documents and programmes.

6) One of the most crucial tools for strategic management is the assessment of business portfolios. The portfolio as a whole is distinct from the simple sum of its parts and is more important to the firm than the state of its individual components, which shows how the many business components are interrelated. Business portfolio analysis may be used to balance risk, cash flow, client renewal, and customer attrition. It is a given that the analysis of a company's portfolio forms the cornerstone of strategic planning.

Consequently, the following are the main effects of the innovative entrepreneurial development mechanism in Azerbaijan:

a) The creation of new jobs, the decrease of state spending on unemployment and layoff benefits, and the creation of other sources of income for professionals, scientists, and students and recent graduates of higher education institutions.

b) Increasing the capacity for innovation.

b) Increasing the percentage of GDP that is obtained by novel goods.

d) A rise in the indicators that signify the addition of additional products.

g) Rapid modernization and renewal of the primary production funds for small, innovative firms.

The main limitation of the research was lack of practical studies in this direction in the local language and by local authors. Also, due to time constraints, data analysis was limited in the interpretation of survey questions and also in the comparative analysis of statistical data.

RESOURCES

In Azerbaijan

1. Abiyeva I. “Post-neft mərhələsində Azərbaycanda iqtisadi inkişafın rəqabətqabiliyyətliliyinin yüksəldilməsi və iqtisadi təhlükəsizliyinin təmin edilməsinin əsas istiqamətləri (Improving the Competitiveness of Azerbaijan’s Economic Development in the Post-Oil Phase and the Main Directions of Ensuring Economic Security)”. Ministry of Education of the Republic of Azerbaijan/Azerbaijan Sate University of Economics UNEC, 2019.

2. Namazov V.Z. “Kiçik Və Orta Sahibkarliğin İnkişafinda İnvestisiya Fəaliyyətinin Rolu”. In Xx Республиканская Научная Конференция Магистрантов, 2020, p.232-233.

In English

3. Autio E., Kenney M., Mustar P., Siegel D., Wright M. “Entrepreneurial innovation: The importance of context”. Research Policy, 2014, 43(7), p.1097–1108

4. Bennett R.J. “Entrepreneurship, small business and public policy: Evolution and revolution”. Routledge, 2014.

5. Bosma N., Sternberg R. “Entrepreneurship as an urban event? Empirical evidence from European cities.” Regional Studies, 2014, 48(6), p.1016-1033.

6. Bremmer D.S. Kesselring R.G. “The determinants of regional manufacturing investment: a simultaneous equations approach”, Journal of Regional Analysis and Policy, 1993, 23(2), p.3-27.

7. Bruce D. Deskins J. “Can state tax policies be used to promote entrepreneurial activity?”, Small Business Economics, 2012, 38(4), p.375-397.

8. Bundrick J. Snyder T. “Do business subsidies lead to increased economic activity? Evidence from Arkansas’s Quick Action Closing Fund”, Review of Regional Studies, 2008, 48(1), p.29-53

9. Cao Q., Gedajlovic E., Zhang H. “Unpacking organizational ambidexterity: Dimensions, contingencies, and synergistic effects”. Organization Science, 2015, 26(3), p.694-711.

10. Chatterji A., Glaeser E.L., Kerr W.R. “Clusters of entrepreneurship and innovation”. National Bureau of Economic Research, 2013.

11. Coad A., Hölzl W. “Firm growth: empirical analysis. In Handbook on the Economics and Theory of the Firm”. Edward Elgar Publishing, 2012.

12. Ebbers J.J. “Networking behavior and contracting relationships among entrepreneurs in business incubators”. Entrepreneurship: Theory and Practice, 2014, 38(5), p.1159–1181

13. Eisinger P.K. “The rise of the entrepreneurial state: State and local economic development policy in the United States”. University of Wisconsin Press, 1988.

14. Glaeser E.L., Stuart S.R. William C.S. “Urban economics and entrepreneurship”, Journal of Urban Economics, 2010, 67(1), p.1-14.

15. Hall B.H. “The financing of innovation. Blackwell handbook of technology and innovation management”. Oxford, UK: Blackwell Publishers Ltd, 2008, p.409-430.

16. Hall B.H., Lerner J. “The financing of R&D and innovation”. In Handbook of the Economics of Innovation North-Holland, 2010, 1, p.609-639.

17. Helmers C., Rogers M. “Does patenting help high-tech start-ups”. Research Policy, 2011, 40(7), p.1016-1027.

18. Henderson R., Clark K., “Architectural innovation: the reconfiguration of existing product technologies and the failure of established firms”. Adm. Sci. Q. 1990, 35(1), p.9–30.

19. Kerr W., Nanda R. “Financing constraints and entrepreneurship. In D. Audretsch, O. Falck, & S. Heblich (Eds.), Handbook of research on innovation and entrepreneurship”. Cheltenham, UK: Edward Elgar Publishing Limited, 2011, p.88–103.

20. Lee Y. “Geographic redistribution of US manufacturing and the role of state development policy”, Journal of Urban Economics, 2008, 64(2), p.436-450

21. Levin R.C., Klevorick A.K., Nelson R.R., Winter S.G. “Appropriating the returns from industrial research and development”. Competition policy international, 2013, 9(2), p.160-196.

22. Chemma N. “Disruptive innovation in a dynamic environment: a winning strategy? An illustration through the analysis of the yoghurt industry in Algeria”. Journal of Innovation and Entrepreneurship, 2021, 10, p.1-19.

23. Minniti M. “The role of government policy on entrepreneurial activity: Productive, unproductive, or destructive”. Entrepreneurship: Theory and Practice, 2008, 32(5), p.779–790.

24. Mitchell M., Sutter D., Eastman S.T. “The political economy of targeted economic development incentives”, Review of Regional Studies, 2018, 48(1), p.1-9

25. Pellegrino G., Piva, M., Vivarelli M. “How do young innovative companies innovate? In D. Audretsch, O. Falck, & S. Heblich (Eds.), Handbook of research on innovation and entrepreneurship”. Cheltenham, UK: Edward Elgar Publishing Limited, 2009.

26. Schneider C., Veugelers R. “On young highly innovative companies: Why they matter and how (not) to policy support them”. Industrial and Corporate Change, 2010, 19(4), p.1–39.

27. Schumpeter J., Backhaus U. “The theory of economic development Springer US, 2003, p.61-116.

28. Teece D.J. “Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy”. Research policy, 1986, 15(6), p.285-305.

29. Tuszynski M.P., Stansel D. “Targeted state economic development incentives and entrepreneurship”. Journal of Entrepreneurship and Public Policy, 2018, 7(3), p.235-247

30. Karnani F. “The university’s unknown knowledge: Tacit knowledge, technology transfer and university spin-offs findings from an empirical study based on the theory of knowledge”. The Journal of Technology Transfer, 2013, 38(3), p.235-250.

31. Wallsten S.J. “The effects of government-industry R&D programs on private R&D: the case of the Small Business Innovation Research program”. The RAND Journal of Economics, 2000, p.82-100.

32. Bashir H.A., Akhtar A. “The role of innovative entrepreneurship in economic development: A study of G20 countries”. Management Studies and Economic Systems, 2016, 54(4258), p.1-10.

33. Ucbasaran D., Westhead P., Wright M. “Opportunity identification and pursuit: does an entrepreneur’s human capital matter”. Small business economics, 2008, 30, p.153-173

34. Wang J. “Do economic development incentives crowd out public expenditures in US states”. Journal of Economic Analysis & Policy, 2016, 16, p.513-538

In Turkish

35. Özdemir S., Ersöz H., SARIOĞLU H. “Küçük girişimciliğin artan önemi ve KOBİ'lerin Türkiye ekonomisindeki yeri”. In Journal of Social Policy Conferences, 2007, 53, s.173-230.

In Russian

36. Акимова О.Е. “Мотивы и стимулы в системе предпринимательской деятельности”. Современная экономика: проблемы и решения, 2010, (9), стр.94-105

37. Шаститко А.Е. “Институциональная среда предпринимательской деятельности (стимулы, ограничения, стратегии развития)”. Общественные науки и современность, 2008, (2), стр.24-35

Internet resources

38. https://www.wipo.int/edocs/pubdocs/en/wipo_pub_2000_2022/ke.pdf

39. https://www.statista.com/statistics/1139190/m-pesa-customer-numbers/

40. https://www.knbs.or.ke/wp-content/uploads/2021/09/Economic-Survey-2021.pdf

41. https://www.statista.com/statistics/1043008/annual-active-customers-jumia/

42. https://www.worldbank.org/en/country/kenya/publication/kenya-economic-update-accelerating-kenyas-digital-economy

43. https://technext24.com/2022/11/08/5g-total-connections-sub-saharan-africa/

44. https://kenyayote.com/jumia-vs-kilimall-comparison-kenyas-best-ecommerce-website-shop/

45. https://d8tten.org/most-developed-startup-ecosystems-in-africa-according-to-the-report-from-startupblink/

46. https://cdn-website.partechpartners.com/media/documents/2021-02_Partech_Africa_2020_Africa_Tech_VC_Report.pdf

47. https://www.statista.com/statistics/881521/india-value-of-startup-funding/

48. https://www.theglobaleconomy.com/USA/GII_Index/

49. https://ncses.nsf.gov/pubs/nsb20221/u-s-and-global-research-and-development

50. https://unec.edu.az/en/innovativ-biznes-inkubator-mmceng/

51. https://vergiler.az/news/article/22098.html

52. https://president.az/az/articles/view/38706

53. https://www.amerikaninsesi.org/a/iqtisadiyyat/4399909.html

54. https://caspiannews.com/news-detail/azerbaijan-creates-free-economic-zone-offering-competitive-advantages-2020-5-26-29

55. https://www.legal500.com/doing-business-in/azerbaijan/.

56. https://www.stat.gov.az/source/entrepreneurship/

57. https://tradingeconomics.com/azerbaijan/gdp”

58. https://smb.gov.az/az/nav/haqqimizda

59. https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm

60. https://azertag.az/xeber/Sahibkarligin_stimullasdirilmasi_yerli_istehsala_destek_iqtisadi_hedefler-1530537

61. https://www.digital.gov.az/az/projects/our-projects

62. https://www.trade.gov/country-commercial-guides/algeria-oil-and-gas-hydrocarbons

63. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2015/IRENA_Africa_Power_Sector_synthesis_2015.pdf?rev=8ddc36b8fcdd40c0a59114261fe84537

64. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/The_Renewable_Energy_Sector_and_Youth_Employment_in_Algeria__Libya__Morocco_and_Tunisia.pdf

65. https://www.ceicdata.com/en/algeria/electricity-production-annual/electricity-production-national-sktm

66. https://www.ief.org/news/algeria-powers-ahead-with-huge-renewable-energy-plans

67. https://www.agrify.com/product-tag/ai/

68. https://squareup.com/us/en/payments

69. https://www.stat.gov.az/news/index.php?lang=en&id=5412

70. https://datareportal.com/reports/digital-2021-algeria

71. https://oxfordbusinessgroup.com/explore-market-research/africa/algeria/

APPENDIX

Survey questions

Kiçik və orta sahibkarların innovativ fəaliyyətlərinə dair sorğu araşdırması

Описание

Demoqrafik suallar

Bu bölmədə yaş, cins, gəlir və sairə kimi faktorların dəqiqləşdirilməsi ilə bağlı suallar ünvanlanacaqdır. Bütün suallar ulduzlanmış, yəni cavab verilməsi məcburi olan suallardır. Demoqrafik suallara cavab verərkən tərəddüd etməməyinizi xahiş edirik, belə ki, sorğu təsvirində də qeyd etdiyimiz kimi, məxfilik və anonimlik qorunmaqdadır.

1) Yaşınız? *

- 1. 18-24
- 2. 25-29
- 3. 30-34
- 4. 35-39
- 5. 40 və daha çox

2) Cinsiniz? *

- 1. Kişi
- 2. Qadın

3) Aylıq gəliriniz? *

- 1. 350-499 AZN
- 2. 500-999 AZN
- 3. 1000-1499 AZN
- 4. 1500-1999 AZN
- 5. 2000 və daha çox AZN

4) Fəaliyyət sferanız *

- 1. Sənaye
- 2. Xidmət

Qapalı suallar

Növbəti sualları verilən cavablardan birini seçməklə cavablandırın. Əgər bir neçə cavab uyğun gəlirsə onların arasında ən prioritetli olanını seçib qeyd edin.

5) Şirkətiniz iş prosesinə yeni texnologiyalar tətbiq edirmi? *

- 1. Bəli, mütəmadi olaraq
- 2. Bəli, vaxtaşırı olaraq
- 3. Bəli, bəzən
- 4. Xeyr, nadir halda tətbiq edir

6) Müəssisənizdə innovasiyaya cavabdeh olan ayrıca şöbə və ya departament varmı? *

- 1. Bəli
- 2. Xeyr

7) Aşağıdakılardan hansı şirkətinizin innovasiyaya olan yanaşmasını ən yaxşı şəkildə təsvir edir? *

- 1. Biz müntəzəm olaraq tədqiqat-inkişafa və innovasiya layihələrinə sərmayə qoyuruq
- 2. Biz bəzən tədqiqat-inkişafa və innovasiya layihələrinə sərmayə qoyuruq
- 3. Tədqiqat-inkişafa və innovasiya layihələrinə nadir hallarda sərmayə qoyuruq
- 4. Tədqiqat-inkişafa və innovasiya layihələrinə sərmayə qoymuruq

8) Şirkətiniz hansı tezlikdə yeni məhsul və ya xidmətlər təqdim edir? *

- 1. Tez-tez (ildə iki dəfədən çox)
- 2. Bəzən (ildə bir və ya iki dəfə)
- 3. Nadir hallarda (1 dəfəsi bir ildən uzun bir müddət çəkir)
- 4. Demək olar ki təqdim etmir (və ya ən azı 2 il çəkir)

9) Şirkətiniz son bir ildə rəqəmsal transformasiyaya sərmayə yatırıbmı? *

- 1. Bəli, əhəmiyyətli dərəcədə
- 2. Bəli, kiçik qismdə
- 3. Xeyr, amma gələcəkdə etməyi planlaşdırırıq
- 4. Xeyr və bununla bağlı heç bir planımız yoxdur

10) Şirkət olaraq uğursuz nəticələnən bir innovasiya layihəsinə adətən necə reaksiya verirsiniz? *

- 1. Nəyin səhv getdiyi ilə bağlı detalları təhlil edirik və ondan öyrənmə təcrübəsi kimi istifadə edirik
- 2. Motivasiyamız aşağı düşür və gələcəkdə riskli layihələr irəli sürmürük
- 3. Biz adətən uğursuzluq riski yüksək olan layihələri öz üzərimizə götürmürük

11) İnnovasiya fəaliyyətləri üçün xarici tərəfdaşlarla (məsələn, universitetlər, tədqiqat institutları, digər şirkətlər) əməkdaşlıq edirsinizmi? *

- 1. Bəli
- 2. Xeyr, lakin bu haqda düşünürük
- 3. Xeyr, bununla bağlı heç bir planımız yoxdur

12) Şirkətinizin innovativ ideyalarının əsas mənbəyi hansıdır? *

- 1. Daxili Tədqiqat və İnkişaf qrupunun irəli sürdüyü layihələr
- 2. Tədqiqat və İnkişaf üzrə öhdəlikləri olmayan işçilərin ideyaları
- 3. Rəqiblərin fikirlərini köçürmək və ya strategiyanızı onlara uyğunlaşdırmaq

13) Hansı şirkətinizin innovasiyaya hazırkı yanaşmasını ən yaxşı təsvir edir? *

- ○ 1. Proaktiv (biz innovativ layihələr axtarırıq)
- ○ 2. Reaktiv (bazardakı dəyişikliklərə cavab veririk)
- ○ 3. Biz innovasiya ilə məşğul olmuruq

Likert suallar

14) İnnovasiyalar müəssisəmizin fəaliyyətinə əhəmiyyətli dərəcədə təsir göstərir.

15) İnnovativ layihələr adətən müəssisəmizə yaxşı gəlir gətirir.

16) Müəssisəmizin rəhbərliyi innovativ ideya və təklifləri dəstəkləyir.

17) İnnovativ layihələri həyata keçirmək üçün kifayət qədər resurslarımız (vaxt, pul, avadanlıq) var.

18) Şirkətimiz işçiləri proseslərin təkmilləşdirilməsi və ya yeni texnologiyaların tətbiqi ilə bağlı təkliflər üçün həvəsləndirir.

19) Biz müəssisəmizdə biznes qərarları qəbul etmək üçün verilənlərdən fəal şəkildə istifadə edirik.

20) Bazarda rəqabətə davamlı olmaq üçün məhsul və xidmətlərimizi daim yeniləyirik.