



REPUBLICAN UNION OF  
EMPLOYERS OF ARMENIA



BULGARIAN  
DEVELOPMENT  
AID

# **FAVORABLE ENVIRONMENT & STATE SUPPORT EFFECTIVE TOOLS FOR SUSTAINABLE DEVELOPMENT & STABLE EMPLOYMENT OF SMEs IN DIFFERENT SECTORS OF THE ECONOMY OF ARMENIA**

DEVELOPED BY THE GROUP OF EXPERTS OF THE REPUBLICAN UNION OF  
EMPLOYERS OF ARMENIA

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# 1.INTRODUCTION

The following report was developed within the framework of the project “Favorable environment and state support effective tools for sustainable development and stable employment of SMEs in different sectors of the RA economy”, according to the terms of the contract signed on December 15, 2022, between the Republican Union of Employers of Armenia and the Embassy of Bulgaria in Armenia, implemented by the financial support of the Government of the Republic of Bulgaria.

## 1.1. Project Brief Summary

According to the project terms of reference, it was envisaged to evaluate the effectiveness of the state support tools in the RA related to Small and Medium Enterprises (SMEs) in different branches of the economy of Armenia. For that purpose, research and data collection was conducted at various dimensions. Namely:

1. Comprehensive sociological surveys with a standardized questionnaire, implemented, in Yerevan and marzes of Armenia among 300 SMEs selected from 5 different sectors of Armenia’s economy. These 5 sectors of the economy included light industry (textile and sewing, food), machinery/equipment engineering and solar energy, jewelry (gold-smithing and diamond smithing), mining, metallurgy and chemical, pharmaceuticals and the service sector.
2. In-depth interviews among 50 representatives of SMEs in various sectors of the economy, as well as experts, economists, representatives of business associations in the aforementioned industries, and policy makers.
3. Three focus groups with SME executive directors, policy-makers and representatives of business associations.

This research report summarized the data and developed recommendations for various policy measures to foster the development of the above-mentioned sectors of the economy.

# 2. SMALL AND MEDIUM ENTREPRENEURSHIP IN ARMENIA

## 2.1. SME Legislation and SME Perception in Armenia

Small and medium-sized enterprises' (SMEs) primary issue is their size. In countries where entrepreneurship is free, small businesses make up the majority of companies. They also typically provide the largest share of jobs. This is also the case in Armenia.

On the other hand, small and medium-sized enterprises (SMEs) are extremely vulnerable to any economic issues that may arise due to a variety of external or internal economic factors in the national economy. That is the reason why the European Union has proclaimed and adopted the concept "think small first" – i.e. because of the vulnerability of SMEs, especially small and micro enterprises. The application of that concept in Armenia is somewhat ensured by the tax and business environment legislation and state policy, but the indicators of SME development, including their participation in terms of taxes paid to the state budget and GDP, remain low in Armenia.

The vast majority of issues faced by small and medium enterprises (SMEs) are due to failure to adhere to the rule "think small first". This may be the result of the introduction of poorly thought-out laws and regulations that do not take into account the needs of SMEs, the assumption of unfair and illegal practices, or merely careless actions of the administration.

Failure to implement the "think small first" approach has had a significant negative effect. Identifying the impact of the regulations is the utmost priority here. Even in countries where regulatory impact assessment is mandatory, administrations tend to circumvent this obligation.

Social partners and other non-governmental organizations (NGOs and business associations) must be adamant in their demand for meaningful impact assessments on SME regulation rather than merely "formal" ones. At the same time, the discussed impact assessments must necessarily address the issue of the impact of the considered legal act on small and medium-sized enterprises.

Indeed, the adverse effect on SMEs is not always predictable, moreover, it is almost always fully predictable. Furthermore, draft regulations that are specifically targeted at small and medium-sized enterprises, are frequently proposed through lobbying by interested parties (large business and their related officials) with the intent to drive them out of the market or prevent them from entering it. Such behavior needs to be strongly and uncompromisingly opposed.

To successfully implement the "Think small first" principle, it is important to enlist the support of social partners (including employers' unions and other entities that represent business interests), non-governmental organizations, and the academic community in addition to relying on the administration's good faith while estimating how projects will affect regulations. The key point here is mutual respect, trust and good faith through dialogue between politicians, public authorities and social partners and NGOs.

It is crucial to clearly define an SME. In the Republic of Armenia, it should be synchronized with the European definition, which is included in the Armenia's law on SMEs (the RA Law on State Support for Small and Medium-sized Enterprises). Over the past years, the Republican Union of Employers of Armenia (RUEA) has made an effort to clarify the definition of small and medium enterprises (SMEs) during discussions organized at the state level and abroad. It can be strongly recommended to approach the SME definition with a broad interpretation, including medium-sized enterprises.

Various indicators are used during the definition and classification of SMEs in RA by the Law on State Support for SMEs, but the most common and frequently required ones are:

- 1) the number of employed workers.
- 2) the revenue generated by the previous year's activity.
- 3) the asset value listed on the balance sheet as of the previous year's end.

In countries such as the Post-Soviet states, including the Republic of Armenia, it is common to have enterprises with a large number of employees, often more than 200-250 people (inherited from the Soviet system), with relatively large fixed assets that include large land areas, basic and auxiliary production facilities and assets, and a large number of employees but with low annual financial turnover.

Such enterprises should be treated as medium-sized rather than large ones (as is the practice case) in post-totalitarian countries, including those in the Post-Soviet region. They should not be treated like large corporations and kept out of SME development and support tools and programs. Since European funding is implemented in EU member countries, there is a significant difference between the EU countries and Armenia in terms of small and medium-sized business promotion and support programs. However, in case of Armenia, we can reasonably recommend that any appropriate and relevant form of support for small and medium-sized enterprises is essentially an investment for employment in the country as well as from the perspective of combating the demographic crisis. It helps keep the workforce in the country.

Since it distorts the market, direct state aid is generally not advised and is outlawed in EU member countries. Moreover, the state is required to compensate the enterprises whose actions have been administratively halted because of natural disasters, epidemics, etc., taking into account our previous experience. Instead of "ad hoc" decisions being made in emergencies, these compensation mechanisms must be regulated by law (at least by the compensation obligation).

The Government of the Republic of Armenia provided such kind of support, especially to mitigate the impact of the COVID-19 epidemic on entrepreneurship, by means of about 24 measures and curfew decisions approved by the Government of Armenia.

As was the case during the COVID-19 epidemic, there should be a clear mandatory rule in the case of foreclosure of business groups and enterprises. While all kinds of enterprises need compensation, it's worth remembering that SMEs are typically the ones who suffer the most.

It is important to distinguish between policies for new businesses, or so-called "startups," and policies to promote and support small and medium-sized enterprises. Here, there is one crucial point of convergence, i.e. the registration of new business. Although registration limitations have been effectively eliminated in Armenia, there are still substantial barriers to starting a business as a result of lengthy permit processing times and arbitrary decision-making.

Much more important is the fact that restrictions on the amount of capital required to register a limited liability company (LLC) have been removed. Previously, a minimum capital of AMD 50,000 was needed to register a Limited Liability Company. Now it is done with a conditional capital of one dram. This reform was implemented years ago, and so far, there have been no unfavorable effects. The latter can be explained easily. The invested capital could be withdrawn as soon as the relevant limited liability company was registered when the capital limit was in effect. In other words, the invested capital did not provide potential creditors with a guarantee of profit. The measure to reduce the capital required to one dram for registering a limited liability company is justified and effective.

Unfortunately, it is difficult for us to comment on the huge variety of vicious, bad practices that operate in Armenia to the detriment of small and medium-sized enterprises. They can be found anywhere. Thus, for example, it is a seemingly innocuous practice to underestimate the extent of the financial performance of enterprises where they are subject to audit. In fact, it is about burdening small enterprises with significant audit costs in some cases.

Our recommendation is to work to free small businesses from parasitic practices that only benefit the people who implement them in cases where there is no doubt that control will have a significant impact on tax collection.

It should also be noted that sometimes the administration gives itself permission to interpret and apply certain provisions in its way. Sometimes there is even discussion of extra requirements, the so-called "invention", which are not covered by the relevant legal act. By the way, the so-called "transmission" of European legislation involves this practice quite frequently. This trend is regarded as "gold" by the administration in Europe. Many issues and obstacles in the field of SMEs have been identified based on numerous studies and research carried out by the Republican Union of Employers of Armenia, which are presented through reports on the website of the Union at [www.employers.am](http://www.employers.am).

Allowing the construction of supermarkets/ hypermarkets inside of cities rather than in their suburbs or, more figuratively, "on the other side of the city ring road" is another example of a very poor policy that has done significant harm. A large number of small businesses suffered severe losses as a result of the entry of hypermarkets/supermarkets and large "discounts" within cities and even in their central areas, and many of these businesses were forced to close. At the same time, it gave large retail chains a false sense of security, enabling them to use incredibly dishonest tactics against the suppliers and manufacturers whose goods they intend to sell in their chains.

Unfortunately, the list of bad practices that harm the interests of small and midsize enterprises could fill volumes. In general, our recommendation to SMEs and the sectoral business associations protecting their interests is to be very persistent in challenging the need for practices that create an administrative burden, regardless of whether the latter will result in a loss of funds or, for example, time (time is a non-renewable resource). This is their right and no one can challenge it.

In conclusion, we emphasize once again the importance of adhering to the "Think small first" principle.

## **2.2. About State Support for Small and Medium-Sized Enterprises**

The Armenia's law on "State Support for Small and Medium-Sized Enterprises" was adopted in 2000, then amended in 2010, October. SME entities have been defined.

SME entities in the Republic of Armenia are classified as:

- micro-enterprises and individual entrepreneurs with an average employee count of up to 10 people, and annual revenue from operations or asset value on the balance sheet as of the end of the previous year does not exceed 100 million drams;
- small enterprises and individual entrepreneurs with an average employee count of up to 50 people, and annual revenue from operations or asset value on the balance sheet as of the end of the previous year does not exceed 500 million drams;
- medium-sized enterprises and individual entrepreneurs with an average employee count of up to 250 people, and annual revenue from operations or asset value on the balance sheet as of the end of the previous year does not exceed respectively 1500 million AMD and 1000 million AMD.

The primary axes of state support for SMEs are laid out in the same law.



Consequently, the key components of state support for SMEs are:

- creating a responsive legal environment,
- enabling financial and investment support, provision of guarantees,
- contributing to the creation and development of supporting infrastructures,
- informational and advisory assistance,
- encouragement of international business activity,
- assistance with innovative projects and integration of modern technologies,
- implementation of a stimulating tax policy,
- staff preparation and training,
- development of refined reporting systems for statistics and accounting,
- assistance with the implementation of state procurement.

## 2.3. The Role of SMEs in the Economy of Armenia

Small and medium-sized enterprises play an important role in the economic development of the country. According to statistics, SMEs account for more than 99.8% of all enterprises in the business sector of the economy, where micro-enterprises are the predominant part. SMEs account for about 70% of total employment in the business sector, and SMEs create up to 60% of the added value of the business sector. It is obvious that the development of the SME sector, support for small and medium-sized entrepreneurs and encouragement of their activities should be the focus of the state constant attention.

The Strategy for Small and Medium Enterprise Development for 2020-2024 was adopted in August 2020 and the resulting action plan for 2020-2026 envisages the introduction of tools aimed at the development of SMEs, for example, increasing the capital of the Guarantee Fund by sharing risks with the banking system, the implementation of a credit tool for SMEs, development of a financial support tool for innovative projects of currently operating SMEs, implementation of the Start-up Entrepreneur Programme (STEP), etc. (See: [www.arlis.am](http://www.arlis.am), Strategy for Small and Medium Enterprise Development for 2020-2024).

One of the challenges of state regulation of entrepreneurial activity is the formation of such an environment where the interests of entrepreneurs and the state can be maximally combined. Therefore, the first step in developing this direction is to strengthen the legislation that currently executes entrepreneurial activities.

Among the main directions of state support for SMEs in Armenia are:

- creation of a favorable legal framework,
- financial and investment support, provision of guarantees,
- contributing to the creation and development of supporting infrastructures,
- information and advisory assistance,
- stimulation of international business activities,
- promotion of innovative activities and support for the implementation of modern technologies,
- implementation of a stimulating tax policy,
- staff preparation and training.

The research study of state regulation policy revealed some general problems inherent in Armenian entrepreneurship, within which the following should be highlighted: the imperfection of the legislative framework related to SMEs, in particular, bureaucratic obstacles, the shortcomings of the legal framework for SMEs, and a tendency to trade activities with insufficient focus on production activities, insufficient level of small business development and ineffective mechanisms of the credit system, lack of a policy to overcome market failures.

The development of small-sized enterprises is a serious socio-economic challenge, which should be given great attention by the state. The adoption of the Law on State Support for SMEs was an important step in this regard. Support for business enterprise and state regulation in Armenia are still in their infancy and require entirely new qualitative approaches. Ensuring sustainable development of entrepreneurial activity (sustainable entrepreneurship) is regarded as an urgent issue, which logically calls for a revision of state policy in this area, particularly when it is crucial for stable employment.

There isn't a single, all-encompassing solution for SME issues; in some situations, the use of centralized methods and in others, the application of decentralized SME development policies, is the key to success. A manifestation of a differentiated approach to SMEs with different business directions, such as to distinguish SMEs with an entrepreneurial tendency and SMEs with a tendency to exist, high-tech and innovation-oriented SMEs and "hidden champions," industrial targeting SMEs and commercially oriented enterprises, should be one of the prerequisites for the implementation of effective activities in this area in Armenia. There is only one logical conclusion: each SME entity needs to use different tools through the state policies implemented in this area to overcome its unique obstacles due to the peculiarities of the nature of its activities. The assessment of the effectiveness of these tools was carried out by the RUEA within the framework of this project.

To ensure the development of small and medium-sized enterprises in the Republic of Armenia, we also recommend giving practical significance to the above-mentioned SME classification used in our legislation, although this classification is evident in the law, it is often disregarded by Armenia's Tax Code, acquiring a declarative nature. In particular, the Tax Code applies a universal tax regime, defining both ultra-small and small, and the same requirements for medium-sized enterprise taxation. As a result, the Tax Code does not even remotely distinguish between the class affiliation of taxable legal entities and individual entrepreneurs (that is, the entity or individual entrepreneur belongs to the ultra-small, small or medium-sized group).

Another recommendation refers to the involvement of professional and sectoral associations, independent experts and research groups whose interests may be wholly or partially influenced by the decision to be made regarding state regulation of entrepreneurial activities. Various commissions and working groups can implement involvement processes through working/public discussions, debates, proposals, applications, and complaints by representatives of specific groups. In this context, it is crucial that such a legislative draft not to be brought up during public discussions and debates as it may be submitted to the National Assembly with significant substantive changes, which occasionally happens as a result of no discussion or insufficient discussion.

Summing up, it can be noted that the SME occupies a special place in the system of market relations, which is characterized by mobility, flexibility, adaptability and high efficiency. The establishment of small enterprises in any sector of the economy is possible and justified **if there is an incomplete level of meeting the needs of society in the given area**. However, the opinions differ regarding the state regulation of SMEs, in particular, the question of what kind of regulations facilitate or hinder the development of SMEs and at what timeframe it is beneficial to apply them becomes a subject of discussion. Undoubtedly, as a result of state regulations, some SMEs prosper, and some, on the contrary, suffer difficulties. However, one thing is undeniably clear: adhering to laws and regulations is intended to ensure the vision of the Republic of Armenia to create a business environment that is healthy, safe, equal, and competitive.

## 2.4. A Few Significant SME Indicators in the Case of Armenia

Over the last years, the average GDP of Armenia's economy has accounted for about 24% of the added value created by micro, small, and medium-sized enterprises. Approximately 69,000 SME business owners run businesses in the Republic of Armenia, and more than 52% of them are centered in Yerevan.

In Armenia's SME sector the value added by a single hired employee does not exceed 7.0 million AMD (about 17.6 thousand USD), in large corporations, it was closer to 10.0 million AMD (about 25.1 thousand USD). We consider it necessary to point out that the aforementioned productivity in terms of a single-wage worker varies depending on the sector of the economy, with only three sectors having the highest indicators.

In Armenia, there are only 23.1 SMEs on average per 1000 people. The density of SMEs in Yerevan is 33 per 1,000 residents, where more than half of them are located, while it is significantly lower in regions. [AMSTAT, Small and Medium Enterprises in the Republic of Armenia, 2019] The Kotayk region stands out among the SMEs outside of Yerevan, where 8.6% of SME entities are located and the SME density is 23.4 per 1000 people.

Armenia has about 10 established companies for every 1000 residents. According to the WB report this index reaches 30 in high-middle-income countries. Consequently, the low-middle-income countries' index and Armenia's index are equivalent.

The Government of Armenia emphasizes the following strategic priorities to strengthen and improve the SME sector in the country:

1. Increasing access to financial resources.
2. Building capacity and entrepreneurial culture of SME entities.
3. Assuring SME entities' access to markets.
4. Creating an environment that is supportive of SME development both institutionally and legally.

As a result of the implementation of the strategy's defined measures, it is intended to contribute to the growth of SMEs' productivity by increasing productivity by 3% in 2020-2023 and by 7.5% in 2024. In particular, one employee's added value in SMEs will reach 12 million AMD in 2024, almost twice as much as the comparable indicator in 2018 (6.7 million AMD).

The strategy's targeted actions will lead to an average 2.5% annual increase in the number of employees in SMEs.

## 2.5. The Current State of SMEs

There were 89,964 organizations officially registered and actively operating in Armenia in 2022 (Small and Medium Enterprises in the Republic of Armenia, 2022), including:

- Micro-sized enterprises: 85150, of which 44,602 are without paid staff
- Small enterprises: 3 994
- Medium-sized enterprises: 687
- Large enterprises: 133

Nearly 72% of formal employment is provided by SMEs, according to data on the number of employees as of the first quarter of 2023.

- Around 97,000 people hold salaried positions in micro-sized enterprises.
- Around 75,000 people hold salaried positions in small enterprises.
- Around 71,000 people hold salaried positions in medium-sized enterprises.
- Around 106,000 people hold salaried positions in large enterprises.

According to SMEs in the Republic of Armenia (Small and Medium Enterprises in the Republic of Armenia, 2022), about 69.5% of the paid jobs within the classifier of the types of economic activity under consideration are provided by SMEs.

It turns out that one small enterprise employs 20 people on average rather than the anticipated 30 employees. Instead of the anticipated 150 employees, the organization on average has about 100 employees. An average of 800 people works for one large enterprise, which is quite a strong indicator if we consider that large enterprises should typically have more than 251 employees.

In general, 63.4% of the Gross Value Added produced by organizations in the considered sectors was contributed to by SMEs. (Small and Medium Enterprises in the Republic of Armenia, 2022).

# 3. ENABLING A FAVORABLE INSTITUTIONAL AND LEGAL ENVIRONMENT FOR SME DEVELOPMENT

## 3.1. Public-Private Dialogue

Here it is crucial to highlight the significance of the state addressing the problems brought up by associations and business unions within the context of public-private dialogue.

The program for the commencement of public-private dialogue and the establishment of dialogue platforms was developed with the support of USAID and approved by the Minister of Economy of Armenia on December 12, 2022, by Order No. H/3956-2022, according to which the duties of the secretariat of the Public-Private Dialogue Platforms were delegated to the State-Private Dialogue Department of the Entrepreneurship Department of the Ministry of Economy.

In the field of SME development, the Government will promote the creation, development and establishment of sectoral associations, particularly by providing operational powers, but we consider it necessary to note that the current level of dialogue with business associations and unions is low and there are few guarantees that those created with state support will be sufficiently principled to protect the interests of their members and have the essential capacity and expertise to ensure dialogue at the necessary level. Often, the level of dialogue frequently varies greatly between various governments, undermining the institutional nature of dialogue.

Consequently, it is problematic for the state to intervene in the establishment of sectoral associations. The foundation of associations or unions of legal entities is not a goal in and of itself. The organizations in those spheres are slowly coming to understand how important it is for them to exist to represent and defend common interests in both the state and non-state sectors. Since they are not founded on shared issues and objectives, associations or unions created through coercion are not consistent. In addition, the right to free association is violated by conventions.

**The Textile Industry Development Plan and its resulting Action Plan 2023–2026 are two excellent examples.**

The improvement of the sector's competitiveness is the primary strategic objective of the program for developing the textile industry by:

- fostering the growth of added value and productivity.
- increasing export volumes and operating under its brands.
- supporting labor force expansion through sustainable capacity development.

The action plan for the development of the textile industry consists of 10 main activities and as a result of the implementation of the action plan, in the forecast period (2023-2026) it is expected:

- to double export volumes in the textile industry,
- to increase the productivity in the sector by 1.8 times,
- to increase the workforce in the sector by 1.6 times.

**The 2020-2024 Strategy for Small and Medium-sized Entrepreneurship Development and its resulting 2020-2022 Action Plan adopted by the Government Decision No. 1443-L, August 27, 2020.**

**The Vision of the Strategy:** SMEs in the Republic of Armenia have a high capacity to adopt, invest and generate innovative ideas and technology, are internationally competitive and embedded in both regional and global value chains, and the culture, business and investment environment are conducive to entrepreneurship.

**The Mission of the strategy:** To create a favorable environment for SMEs of the Republic of Armenia through the development of entrepreneurial skills, implementation of ideas, and increasing competitiveness, which will provide access for small and medium-sized enterprises to domestic and foreign markets.

**Objectives and Targets:** The strategy aims to promote the development of medium-sized entrepreneurship in Armenia, increase the productivity of SMEs, to support the growth of SME competitiveness in domestic and international target markets through private undertaking, introduction of the most productive technologies and adoption, implementation, and generation of innovative ideas.

As a result of the implementation of the measures identified in the strategy, the formation and development of innovative and competitive SMEs contributing to the sustainable and inclusive development of the RA economy will be ensured.

**Increasing the productivity of SMEs:** As we previously mentioned, the annual added value produced on average by one employee of an SME in Armenia is nearly 2.5 times lower than the average for OECD countries. To increase the competitiveness of Armenia's SMEs, or to reduce the productivity gap, and based on the long-term economic growth target, the following goals were established for the strategy:

**Productivity growth: 6% per year.** To increase the share of SMEs in GDP to 55% within 5 years.

**Growth of employees in SMEs: 3.2% per year.** Entrepreneurship development courses will be implemented at different stages of the educational system.

**Global Entrepreneurship Index 40 (points)**

## 3.2. Key Directions and Priority Actions

To strengthen the SME sector and increase competitiveness in Armenia, the following strategic directions have been highlighted:

- 1) Increasing access to financial resources
- 2) Development of capacities and entrepreneurial culture of SME entities
- 3) Ensuring access to markets for SME entities
- 4) Enabling a favorable institutional and legal environment for SME development

## 3.3. Increasing Access to Financial Resources

Difficulties in lending to SMEs are associated with several significant barriers as: lack of creditworthiness and/or strong credit history, inability to develop a business plan (difficulties in properly presenting the viability and feasibility of a business requiring financing), lack of adequate collateral (correspondence of collateral value, degree of liquidity, preferably real estate), etc.

According to the 2018 statistics of the "Global Competitiveness Index", Armenia ranks 81st of 140 countries in the SME financing sub-index.

On the other hand, as a result of the low efficiency of the bankruptcy process in Armenia and the time-consuming nature of tax audits, financial and other assets are directed to the repayment of debts rather than to the recovery of the organization.

### **Priority Action 1. Expanding the effectiveness and coverage of the SME State Support Toolkit.**

The current support toolkit enables SMEs operating in marzes to partially solve collateral issues and create added value at the level of their community, marz and republic. The state policy emphasizes the role of SMEs especially for boosting economic activity in marzes. The Government strives to increase the current funding, both from the projects implemented jointly with international partners and from the state budget, as well as to strengthen the toolkit of support programs. At the same time, working with the entities of the financial market, risk distribution schemes will be developed, as a result of which the bank will provide 4 units of credit for one unit of guarantee, instead of the current ratio of 1:1. In other words, the volume of loans provided under the guarantee of capital funds and the efficiency of program evaluation will be increased, as the program will be evaluated both by the bank and the state support authority.

### **Priority Action 2. Development of the legislative and institutional framework related to the application of alternative collateral to real estate.**

The Government of Armenia intends to analyze the opportunities and obstacles to the use of alternative collateral-backed loans and other financial instruments (asset-based financing: factoring, leasing, cash flows) available in the market and, in cooperation with stakeholders, to develop a reform agenda that will include building the capabilities of employees of financial institutions, as well as a package of relevant legislative changes and raising awareness among SMEs. As a result, an increase in the use of the aforementioned financial instruments by SMEs is expected.

### **Priority Action 3. Increasing financial literacy and developing a transparent business culture.**

To achieve this, the Government intends to carry out an information campaign aimed at promoting transparent practices and corporate governance, and envisage educational programs aimed at increasing technical capacities. On the other hand, it is necessary to reduce the costs associated with "law-abiding" and "standard" accounting for businesses. Within its framework, the Government will consider the possibilities of encouraging the use of IT solutions and will implement relevant educational programs, the promotion of digitization among SMEs will significantly improve the situation. Armenia's banks remain the leaders in terms of digitization. The Republican Union of Employers of Armenia has conducted a research study on the promotion of digitization and developed its policy (Policy Paper [www.employers.am](http://www.employers.am)).

It is expected that as a result, the level of risk assessed by financial institutions will decrease and the activities of investment funds will be activated in the SME projects.

The research experience of the RUEA comes to prove that the difficulty SMEs have in obtaining financing is primarily a result of their unstable entrepreneurial status. SMEs are quickly impacted by negative external and internal factors, whereas large companies can maintain their steady state. Therefore, we believe that encouraging cooperation between large and SMEs at the state level, using support tools designed for SMEs, and offering SMEs through large corporations will increase the stability of SMEs. The necessity to strengthen the cooperation with the big ones, the imperative to promote the improvement of the entrepreneurial culture among SMEs through the big ones, and the regulations of classifying SMEs as their partners by the big ones will significantly change the situation for different SMEs in a cumbersome of the economy.

Since the available statistics show that each large company can consolidate around itself and provide stable entrepreneurship with an average of 2,500–3,000 SMEs using the outsourcing method, the state must encourage the establishment of large companies in Armenia through various investment programs and the transfer to international business. The number of such large companies in Armenia exceeds 10, and increasing that number by another 10 (having at least 20 such large companies) will guarantee the sustainable entrepreneurship of a total of about 50,000 micro and SMEs. This approach of ours is an alternative option for ensuring micro and SME sustainable entrepreneurship, due to which SMEs will benefit from new opportunities and indicators in terms of obtaining loans or providing access to finance.

A large number of micro and SMEs cannot receive credit guarantees due to a lack of government funding. Hence, the model we've proposed can significantly decrease the burden of state support in terms of getting loans, fostering a culture of entrepreneurship, ensuring food and labor safety, meeting legal requirements for a green economy and the environment, getting accredited, and successfully implementing adopted strategies in the micro and SME sector.

**Priority Action 4. Creation of favorable conditions for financial market diversification: investment/venture funds, business angels, alternative financing tools.**

**Priority Action 5. Reforming the bankruptcy system**

The Government intends to thoroughly study the legal provisions and institutional framework related to the bankruptcy process in Armenia and jointly develop a list of changes with all beneficiaries aiming to simplify and speed up the current process, strengthen the rights of creditors and increase the level of recovery of funds.

As a result, it is expected to reduce the volume of funds frozen in non-performing assets, as well as to decrease the level of risk assessed by the financial system. Emphasis is placed on the "Second Chance" for enterprises with prospects due to efficient bankruptcy procedures that use debt restructuring mechanisms.

### **3.4. Capacity Building of SME Entities and Promotion of Entrepreneurial Culture**

The development of competitive SMEs greatly depends on the availability of technical and human resources. However, a significant number of SMEs needs capacity building, particularly in terms of new approaches and technologies, marketing, accounting, strategic planning and financial management, and necessary entrepreneurship education.

The main focus of the state policy will be on reducing the technology gap in SMEs as much as possible, enhancing the capacities of SMEs to implement and use technologies.

To encourage innovation in SMEs, it is first necessary to raise awareness among them about the importance of innovation for increasing the value added and competitiveness, and to some extent stimulating the demand for innovation. In particular, the implementation of projects contributing to the increase of energy efficiency will be of crucial importance.



**Priority Action 1. Development and implementation of a support tool targeting the introduction and application of innovation through public support institutions.**

The Government intends to improve the targeting of support to SMEs to support the implementation of innovative programs that contribute to increasing productivity. In particular, plans for the establishment of technology centers for shared use will be implemented.

**Priority Action 2. Expanding collaboration with government agencies among SME sector and with organizations offering business development services to fill the SME's capacity gap.**

Affordable and high-quality consulting services can significantly reduce the transaction costs of attracting loans for SMEs, increase the level of management, and promote the use of innovation, thereby enhancing the competitiveness of companies. The Government will develop a mechanism to establish a platform of consultants and mentors, where experienced specialists from Armenia and the Diaspora will be involved. Through this platform, SMEs with growth potential will be given a boost. In our opinion, it is necessary to promote the use of ISO quality management systems, which will significantly improve management and productivity among SMEs, making SMEs more predictable, as a result of which it will be easier to use consulting services and improve the overall indicators obtained. It is no secret that many problems of SMEs are caused by poor entrepreneurial culture and poor management performance.

**Priority Action 3. Creating an environment aimed at improving the qualifications of entrepreneurs and those employed in SMEs.**

The Government intends to assess the demand for the labor force in SMEs and, using the data obtained, develop educational programs and courses for educational institutions (in particular, VET) together with representatives of the business community.

At the same time, taking as a basis the strong demand for technical knowledge in SMEs, the Government will support the best experts' involvement in developing relevant capacities and sharing experiences.

**Priority Action 4. Development and implementation of a program to encourage SMEs' demand for science, information technologies and technological solutions.**

The Government of Armenia strives to promote innovative ideas aimed at meeting the requirements of SMEs and support strengthening ties between the scientific community, IT companies and SMEs through the use of technology parks' resources.

The Government of Armenia aims to jointly support the IT community in raising the level of awareness of IT and automation solutions in SMEs and to encourage start-up business owners to use the right solutions when they are just starting.

The Government will implement programs for the shared use of resources, research and technological infrastructure, incubators, and clusters in consideration of how challenging it is for small businesses to adopt new technology.

The public procurement system does not encourage innovation among SMEs, according to the RUEA's experience with SME issues. Announcing public procurement tenders with stricter requirements denies SMEs the chance to offer unique and innovative solutions. It would be more practical for public procurement to present the issues and the application of the procurement result, in which case the organizations will ensure the achievement of the given goal with innovative solutions. We consider it worth noting that the working group discussions (focus group discussions)

conducted by the RUEA during this research have shown that IT services and products have a weak use among the SMEs in Armenia because the latter is unable to provide relevant payments compared to international ones. It turns out that the low profitability of SMEs is a significant barrier to using IT products.

#### **Priority Action 5. Development of entrepreneurial culture.**

The Government will strive to make entrepreneurship visible to graduates as a career type at all levels of the educational system, to foster the development of unique entrepreneurial thinking and characteristics (leadership, responsibility, proactivity, willingness to take risks, etc.), and to promote the development of entrepreneurial skills of students and pupils (teamwork, communication), as well as presentation skills, project management, time management, etc. In this regard, we find it important to draw attention to the RUEA policy (Policy Paper) that was created as a result of its research on skills among 1000 organizations and is available on the RUEA website, [www.employers.am](http://www.employers.am).

According to research conducted by the RUEA, SMEs try to assign multiple tasks to the same employee to demonstrate flexibility and save resources. Therefore, it becomes necessary for SMEs to employ personnel with a variety of skills and competencies.

As the aforementioned research from our team demonstrates, SMEs require a variety of specialized skills, which the current educational system finds challenging to provide in even one major. In other words, it becomes critical to train a specialist within an SME. Therefore, In this case, state and non-state support should be focused on professional training in the SME organization and their subsidization to integrate education into the field of SMEs.

Considering the relatively low representation of women and youth among start-up entrepreneurs, it will be important to implement targeted measures aimed at increasing entrepreneurship among women and youth, especially in marzes.

It will include awareness, educational, and mentor engagement activities. Integration of repatriates into the business community of the country will be emphasized. The importance of integrating repatriates into the country's business community will be emphasized.

The Republican Union of Employers of Armenia considers stable employment, ensuring equal labor rights for men and women, and promoting employment of women and young people to be important within its statutory objectives.

Jointly with its partners, the RUEA implements it in three directions:

1. Fulfilling the requirements of international conventions, especially in the case of conventions ratified by the Republic of Armenia.
2. Continuous improvement of Armenia's Labor Code and related laws.
3. Through Tripartite Social Partnership.

### **3.5. Ensuring Access to Markets for SME Entities**

Access to markets enables enterprises to develop by incorporating their full capabilities, i.e. to achieve a competitive and sustainable position by increasing productivity. Considering that Armenia has a small domestic market, increasing competitiveness and ensuring economic growth at the expense of exports is emphasized as the main policy priority.

From the perspective of entering the markets and gaining the necessary confidence in the export sector, the RUEA emphasizes state support in international certification processes, particularly in the following directions: GlobalGap, CE, ISO, HALAL, etc.

It is important to note that SMEs play a minor role in export transactions both in Armenia and in many countries of the world. This is because SMEs face some challenges that make it difficult for them to increase their exports, including the following:

- low competitiveness of SME products in foreign markets due to non-compliance with relevant quality standards,
- effective marketing and logistics implementation issues for SMEs,
- lack of knowledge about foreign markets,
- insufficient volume of products of SMEs for foreign markets, difficulty in making regular supplies.

The establishment of accumulative bases of goods in the countries that are significant partners and intersections for Armenia, the establishment or leasing of logistics facilities, and the opening of supermarkets in various countries, particularly in Armenian diaspora hubs, can all play a vital role for Armenia in this situation.

### **Priority Action 1. Ongoing support for SMEs entering new markets.**

The Government intends to increase the availability and accessibility of information on export and import procedures for SMEs, as well as to carry out information dissemination activities among SMEs on opportunities (information on current trade regimes and markets) and risks in international markets.

The Government intends to launch the one-window system of foreign trade in response to the administrative challenges that currently exist in the field, which contribute to reducing the costs of SMEs carrying out export and import operations.

According to the experience of the RUEA, administrative complexities can be greatly reduced and resolved by making effective use of the trade relations of the Union and business associations and signed memorandums of cooperation. The total number of such memorandums exceeds at least 150. State support may also be provided to foster trade and economic ties under these MoUs. In addition, the RUEA emphasizes the importance of including the economic component in diplomacy and foreign policy, which can create new opportunities for export and trade integration.

### **Priority Action 2. Enhancement of SMEs' visibility in international markets to promote trade and investment.**

The Government of Armenia will actively promote the expansion of Armenian SMEs' presence in international markets. The increase of the presence of Armenian SMEs in international markets will receive direct support from the Government of Armenia. To achieve this, the Government intends to discuss the potential of the toolkit and its more focused targeting with the private sector, in addition to the already existing support tools, such as support for participation in exhibitions and business conferences, and develop an action plan in line with those discussions.

It is planned to carry out measures for establishment of the "Made in Armenia" brand, in particular, to enhance the level of representation and recognition of Armenian manufacturers in international markets.

As to the RUEA experts, the visibility of SMEs can be increased through fairs and business forums held in Armenia, for example, by holding an international fair in Armenia named "The Armenia export potential".

**Priority Action 3. Technical support for the process of compliance with the requirements of target markets.**

The Government strives to support Armenian SMEs in identifying the requirements in international markets, both ensuring and proving their compliance. In this regard, the Government will develop a toolkit of relevant tools and strategies, which will be presented to the private sector for discussion.

**Priority Action 4. Establishment of logistics/warehouses.**

The Government strives to develop a toolkit that will support the establishment of logistics/export centers providing logistics, warehousing and other related services to SMEs in Armenia.

**Priority Action 5. Creating an enabling environment for e-commerce expansion.**

Within the framework of this action, the Government is planning to study the market of payment systems and postal services, and if necessary, develop an agenda for institutional and legislative reforms. In addition, a manual will be developed on all stages of product sales on global and regional electronic platforms, as well as electronic sales of products of SMEs operating in marzes will be promoted in the whole region of Armenia.

We believe that it is possible to collect data on both existing and emerging electronic platforms and take into account their commercial potential (Database, replenishment speed, users, commercial flexibility of the platform, etc.). Aiming to target the entry of global trade networks into Armenia, first of all, we should think about state support for increasing its effectiveness.

**Priority Action 6. Encouraging SMEs to participate in public procurements.**

The Government strives to increase the availability of information on public procurement and its procedures for SMEs and to consider the possibility of removing administrative barriers for SMEs, as well as to highlight the opportunities for Armenian companies to participate in public procurements of EAEU member states. Currently, opportunities to participate in municipal procurement are being developed within the EAEU framework, but the application processes still need to be regulated.

**Priority action 7. Facilitation of SMEs integration in the value chain of large enterprises.**

The integration of SMEs in the value chains of large enterprises is a necessary precondition for growth and development in developed economies.

The Government aims to be a connecting link for the establishment of cooperation between large enterprises, exporters, and local SMEs. SMEs should be supported in understanding the requirements of large enterprises and enhancing their visibility in the marketplace. Furthermore, SMEs must be encouraged to merge because their isolated capacities might not be enough for individual activities in big markets. Again, we would like to highlight the use of our proposed model of cooperation between large and small players in the Armenia market.

### 3.6. Providing a Favorable Institutional Environment

The Government of Armenia is planning to implement comprehensive measures to improve the ecosystem supporting the SMEs development, based on the activities coordination of organizations implementing projects on supporting SMEs within the framework of state, private, and international organizations or programs. The Government will promote the capacity development of state agencies, including those that operate at the regional level, as well as enhance diversification of services and goods they provide, especially in those areas where SMEs are in strong need, but where private and/or international structures do not or only partially satisfy those needs.

During the development of products/services, main goals of product/service development will be to make them widely accessible to SMEs, particularly in rural areas, primarily at the expense of service digitization, while maintaining an ongoing, productive dialogue with the beneficiaries.

The Government will implement a "one-window" procedure that combines consulting, financial, and mentoring services to promote investment in start-ups.

Particular attention will be paid to improving the quality and accessibility of statistical data, considering their importance both for the Government in terms of effective policy-making and for SMEs in terms of making decisions within their activities.

The expert point of view of the RUEA is to classify and develop consulting services, by increasing their quality and expanding their range.

We believe that by conducting a specific qualitative assessment in the area of consulting services, it will be possible to promote the type of consulting services that are currently lacking, based on global best practices and taking into account local requirements, with state support, the creation of efficient consulting packages can be promoted.

#### **Priority Action 1. Development and implementation of private-public dialogue mechanisms.**

The new working procedure of the SME Council and online platforms are two of the private-public dialogue mechanisms that the Government seeks to establish. The Government also intends to discuss with the private sector the establishment of feedback by other possible methods and develop a package of relevant solutions. As a result, the "Think Small First" philosophy will be applied to state policy regarding SMEs. Over the implementation of this action, strengthening the position of organizations with a business membership will be crucial.

#### **Priority Action 2. Capacity building of state support structures and increasing the efficiency and transparency of their activities by introducing corporate governance and accountability mechanisms.**

The Government intends to significantly strengthen the current human and financial resources in the SME support agencies in the following main directions:

- Provision of relevant support to start-up entrepreneurs in an integrated "one-window" procedure,
- development and implementation of support programs for different target groups of entrepreneurs (social enterprise, innovative programs, export-oriented programs),
- capacity building as required to address issues and challenges faced by current SMEs.

### **Priority Action 3. Statistics improvement**

To improve the quality of policy and strategy, the Government intends to significantly improve the current statistics and analytical output on SMEs. Aiming to achieve this goal, it is planned to carry out periodic surveys to highlight current issues and provide feedback, to significantly enhance official statistics, and operational information collection mechanisms, as well as to ensure the accessibility of quantitative and qualitative data on SME loans in Armenia's financial sector.

We think it is necessary to make the best use of the analytical and research capabilities of unions and business associations. In particular, since 2008 the Republican Union of Employers of Armenia has continued to conduct ongoing study and research projects that are either directly or indirectly related to SMEs and specific sector problems. Particularly, only in the field of SMEs, the RUEA has implemented 7 research projects, and at least 8 other projects, involving related research or analysis. Published materials on research can be found on the website of the RUEA at [www.employers.am](http://www.employers.am)

### **Priority action 4. Coordinating the efforts of donors carrying out projects on SME support.**

The Government will collaborate closely and actively with the international community to establish a successful process for resource effective mobilization. It will be planned to ensure the prompt and coordinated replenishment of state funding with funds from the international donor community. The process of resource mobilization will be guided by the SME strategy and action plans developed on its basis. Detailed information on the current programs should be made available within the framework of the "one window" system.

We consider it necessary to include business unions and associations within the "one window" system's framework.

## **3.7. Ensuring a Favorable Legal Framework**

Despite the generally favorable climate, the legislation shaping the business environment needs continuous improvement.

In the conditions of the created economic realities, it is necessary to review some regulations, in which the SME entities have serious development difficulties. To overcome these difficulties, the actions planned by this strategy will be carried out in the following directions:

### **Priority action 1. Development and implementation of SME impact assessment mechanisms.**

The Government intends to develop mechanisms for assessing the impact of SME regulation. The existence of such a mechanism will allow for highlighting the impact of current or proposed regulations from the perspective of the SME community and making the most problematic regulations the subject of discussion.

In our opinion, it is necessary to emphasize the role of SMEs in community and regional development programs. In addition, it will be useful to include the SME subject in various election programs, especially community ones, making them a rational program indicator of election programs.

**Priority action 2. Assessment and simplification of tax/customs/other administrative burdens for SMEs.**

The Government of Armenia is planning to conduct an in-depth assessment of the administrative burden, reveal the causes of the burden, develop a package of relevant solutions as a result of discussions with the private sector, and implement those solutions with the highest impact by mutual agreement.

The RUEA has published two separate analytical reports on the tax burden and the causes of business closures on its website. These reports include recommendations for useful solutions and reforms.

# 4. SOCIOLOGICAL STUDY REPORT

## 4.1. The Research Objectives

With the financial support of Bulgarian Development Aid, the Republican Union of Employers of Armenia (hereinafter referred to as the Union of Employers) implemented the program of “Favorable environment and effective tools of state support for the sustainable development of SMEs and stable employment in various branches of Armenia’s economy”, including the following important issues:

- possibilities for export growth,
- current situation of manufacturing,
- opportunities for industrial development due to these companies’
  - o production and technical resources,
  - o the availability of necessary specialists,
  - o technologies, and products, and
  - o the potential for scientific and industrial development.

**The aforementioned five sectors are:**

- solar technology, machinery/equipment engineering, and IT,
- pharmaceuticals,
- the chemical industry and metallurgy (including metalworking),
- the jewelry (gold-smithing and diamond-smithing),
- light industry, including the textile, leather, and food industry sectors.

**The research study aims to provide the Ministry of Economy of Armenia** with the necessary multifaceted data, based on which it will be possible to improve the development **concept for these five industrial branches**, the export strategy, and the necessary tools of state support, including the specific expectations of each sector.

Examples of industrial policies within the framework of the sectoral approach have been implemented at various times by the USA, Germany, France, Sweden, South Korea, India, Japan, and many other countries.

**When is industry-specific targeted development effective?**

**The sectoral approach** implies the support of superior branches and productions, as well as the **implementation of new types of economic activity**, for example:

**The market by itself is unable to identify in time those industries that can be relied upon in the future and quickly focus the necessary resources for the accelerated development of these industries.**

In other words, **an accelerated structural restructuring of the economy cannot be carried out by the market.** The Government is accountable for it. **The Government, not the market, regulates the economic structure.**

For example, it is difficult to find a thriving industry in developing countries that is not the result of industrial policy implementation.



**In this term, state intervention in economic development is crucial, but it is only justified when it simultaneously has specific goals of economic structural transformation in a particular development situation.**

**Therefore, the sectoral approach to economic development does not serve as a goal in and of itself; rather, it is used to regulate or restructure and alter the economic structure.**

Moreover,

**The sectoral approach is effective when the specific industrial branch has not yet accustomed to the dynamic rhythm of development. The state is no longer able to control how an industry branch develops once it starts to grow dynamically.**

**Therefore, when a particular sector of the economy is still developing or undeveloped, the role of the state in changing the structure of the economy is most effective.**

The sectoral approach is applicable in the food industry as a sector ensuring the country's food security, as well as in the energy and transport branches as sectors creating prerequisites for economic independence and structural transformations.

The sectoral approach is also applicable in the case of creating new types of economic activity through public-private sector dialogue and **within the framework of an innovative approach.**

**Currently, Armenia is striving to implement an export-oriented industrial policy, which has the real potential to replace the monetarist approach.**

**However, the general theoretical and methodological foundations of industrial policy have not yet been formulated in Armenia, i.e., what economic structure Armenia is striving for and how it can be achieved, and there is no understanding of the precise organizational-management mechanism and economic significance of implementing this economic structure. This research study comes to fill that gap.**

The methods, tools, and approaches of industrial policy should support the goals of economic policy.

**The selective (alternative) tools characteristic of the sectoral approach are more applicable for the development of sectors that provide economic security or for initiating the establishment of new types of activities.** The institutional strategy for promoting production cooperation within the context of regional integration can be developed in the future.

### **Why were these five industry sectors selected?**

Armenia must prioritize economic growth in areas that will directly involve the population in the labor market, alleviate unemployment and reduce poverty.

For instance, while Armenia's IT sector is currently growing and enjoys tax benefits, the majority of its orders are coming from international companies and the human capital of this branch is not used effectively for the development of Armenia's economic branches. Therefore, **it is critical to ensure economic development, including the promotion of high technologies, especially in those industrial sectors where growth will directly address pressing social issues, such as reducing unemployment and poverty in the Republic of Armenia.**

## Why solar technology and solar energy?

Current sources of electricity in Armenia are limited.

- **The nuclear power plant is old**, and building a new one is both difficult and expensive.
- **Operation of thermal power plants is financially risky and more expensive.**
- **The perspective of hydropower stations in Armenia is running out.** Armenia is lacking water storage networks. Lack of rainfall and increasing heat will further reduce water resources in Armenia and, therefore, the useful operation of hydropower plants will be decreased rapidly.

**It is becoming both crucial and viable to switch to alternative energy sources.**

Armenia is one of the few countries in the world that annually has more than three hundred sunny days (not cloudy), hence, the solar energy capacity is of high quality for using solar energy.

In recent years, the cost of semiconductor solar cells has made solar plants more affordable both for business enterprises and the population in general. There are wide opportunities to install a solar energy plant in the territory of Armenia and to obtain cheap alternative energy, both in different marzes of Armenia and in urban development (by installing solar panels/plants on the roofs of buildings and houses).

The volume of production and sales of solar technologies in the domestic market can amount to at least 350 million US dollars (1 US dollar = 390 AMD).

Leveraging the sun's capacity will encourage the production of solar energy and agricultural goods (vegetables and fruits), raising the sector's contribution to GDP to at least 30%.

## Why pharmaceuticals?

Due to migration and low birth rates, **Armenia's population of permanent residents has been steadily declining** for more than 20 years (Armstat 2021a, 2021b).

Meanwhile, **the amount of imported medicine and equipment has increased in past years**, and in 2019, in the sphere of medical equipment Armenia imported equipment at about 60.7 million US dollars, which is about 3 times more than exported (Tadevosyan 2021a, 75). In recent years, the average cost of importing medicines has exceeded 140 million US dollars. As drug imports continue to rise, this is some evidence that the population has a public health issue.

- It is strategically appropriate to encourage the production of own drugs in Armenia to meet the needs of war situations and the most essential drugs for the population because **the country is at war and lockdowns and epidemic situations are still possible**.
- In addition, this sector is **one of the dynamically growing sectors** in Armenia, and more than half of the products are exported.
- **The sector of pharmaceuticals** is also a high-tech industry, because the applied technologies, modern equipment and personnel are innovative in nature and must constantly address the challenges of the healthcare sector along with their product range and quality.
- Meanwhile, the market of Armenian herbs has its capacity for the development of the Armenian **"Made-in-Armenia" brand from the perspective of export**, but it is not yet fully realized in pharmaceuticals (marketing is limited and is mainly implemented for teas).

## **Why gold-smithing/diamond-smithing and light industry (textile, leather, food industry)**

**Every fourth resident in Armenia is supposed to be poor** (Armstat 2021b, p. 32), and the **solution to the socio-economic situation is related to those industrial sectors that have a great capacity to promote stable employment.** Those sectors are gold-smithing and textile, leather and food industries, due to which thousands of workplaces can be created in a few years, improving the social situation in Armenia, thus, decreasing unemployment and reducing poverty.

**The textile industry** has always been one of the important branches of the economy in Armenia, and Armenia was considered to be **one of the leading textile suppliers of the USSR** (Shahrimanyan 2021). **During Soviet times, Armenia's textile industry accounted for 25% of Armenia's employment** (Shahrimanyan 2021) and had 115,000 employees (the Ministry of Economy of Armenia 2013). Currently, approximately 8,000 people work in the textile industry (Shahrimanyan 2021).

Especially after the Karabakh war, due to the patriotic tendencies of the people and the result of the embargo on products imported from Turkey, currently, there is a great preference **to buy "Made in Armenia" products in the local market, which opens up new opportunities and creates new workplaces in the textile industry due to the promotion of former traditions in the economy** (Shahrimanyan 2021).

After the 2018 revolution, clothing production in the textile industry increased by 28%, and from 2010 to the present, the number of economic entities in this sector doubled, considered to be the fastest-growing annually, compared to other sectors (According to Enterprise Armenia data cited by Shahrimanyan 2021). And the annual number of people employed in this field increases by 20% (Enterprise Armenia data cited Shahrimanyan 2021).

Although it is logically assumed that these industries are driven by mass production, the **handicrafts and other related products in both the gold-smithing, textile, and leather industries have a significant potential to generate new employment.**

Armenia has a **fantastic culture based on centuries-old traditions and human capital in the industries of jewelry, leather and food production (fruits and preserves).**

**- Particularly, handicraft has a very prospective significance for the development of the Armenian brand "Made-in-Armenia".**

- Armenian ornaments, semi-precious stones, leather and stone-processing customs and the distinctiveness of our national patterns all contribute to the export potential and new level of this industry's entry into new markets, as unique handicrafts can fetch higher prices than mass-produced factory templates. **The growth of the "Made-in-Armenia" Armenian brand of handicrafts will have a significant impact on the living standards and participation of the population in the labor force.**

**- Therefore, not only technologically equipped or advanced industries should be developed, but also customs and traditions-based sectors, in which the population is already involved.**

**There is still no model of institutional development promoted by the state for these sectors, and it is crucial to create it.**

- In the food industry, Armenia successfully produces preserves, juices, jams, and dried fruits and has already established a market share in countries like Russia, the EAEU, and the USA. **Mechanisms for creating added value**, e.g. packaging and design should be promoted and emphasized.

### **Why machinery/equipment engineering and metallurgy (including metalworking)**

Machinery/equipment engineering and metallurgy are considered to be high-tech production sectors that saw an increase in their share of the exported processing industry from 1% in 2010 to 10% in 2019 (Tadevosyan 2021b). In other words, it is a sector of exports that is dynamically growing.

The fields of metalworking and machinery are related to one another and have a number of new development opportunities in Armenia.

- **Unlike in the Post-Soviet era**, when the majority of metal products were imported, Armenia already has the capacity to produce a variety of metal goods. A number of factories in Armenia currently produce metal objects and items.
- There are **cable factories** in Armenia that produce high-quality aluminum and copper wires.
- Composite materials are also created in Armenia. These materials, such as glass or basalt stone threads, can be used in place of metal to create a variety of lighter and more durable objects.
- Natural pigments, eco-paints, and **high-quality paints with anti-corrosion properties are produced in Armenia and are crucial for metal construction.**
- The concept of engineering has also begun to advance, and there are small enterprises engaged in designing.
- In the area of materials science, there are some innovations and inventions.

These enable the development of machinery that in its turn will contribute to:

- The growth of **assembly-line manufacturing, and the potential of marketing those assembled goods under the "Made-in-Armenia" brand.**
- **The advancement of materials science in the field of metallurgy**, the production of significant materials and their constituent parts, as well as the development of science in Armenia in relation to these parts will all be influenced by these improvements.
- **The development of nanotechnologies in the field of materials science**, which will also be used in machinery and metalworking.
- Activities in these areas will include measures improving the efficiency of solar power plants and upgrading solar water heaters, in agriculture - automation of agricultural systems, including greenhouses, in sub-sectors of the mechanical engineering industry - engineering solutions, including the design and production of various devices, equipment, production of waste incinerators, various sensors, aircraft, protection systems for military industry, individual engineering solutions in the field of tourism and transportation.
- The production of gas burners, gas flame-cutting machines, electric welding equipment and electrodes, as well as valves and regulators for gas cylinders can also be developed.
- There are no essential issues with labor or raw materials. Actually, consumer markets and demand are the areas of concern. To gain access to markets through quotas and international agreements, the state must provide support. If there are consumer markets, Armenia can produce any type of engineering product.

## 4.2. Methodology

The RUEA's research team was comprised of technologists, engineers, and sociologists, and incorporated **both quantitative and qualitative methodologies**.

- **A standardized questionnaire that had been developed in advance** was used to survey enterprises for quantitative research. The SMEs were selected using a purposive, non-probability sampling, with an objective to include both well-known and companies in the industry, as well as enterprises and start-ups established in recent years. The **standardized surveys were carried out in-person and remotely via phone, e-mail, or an online survey platform to ensure data collection completed in time to inform the Government on the elaboration of the Strategy of Economic Development of Armenia. Total of 300 enterprises from 5 industries were included in the survey sample.** The survey was carried out by the "Sociometer" sociological research center in accordance with the terms of the agreement signed with the RUEA.

Qualitative research included:

- **56 in-depth interviews** conducted with industry experts and representatives of enterprises from each of the 5 sectors. The inclusion of the service sector has led to an increase in that number of planned interviews (from 50 to 56 interviews). The range of topics studied during in-depth interviews included the specifics of the growth of the chosen branch of the economy, challenges, anticipated instruments of governmental support, export potential and opportunities, and issues of human resources in the context of stable employment and sustainable.
- **3 focus groups:** SME entity representatives and experienced professionals were also invited to 3 focus groups, to complement and discuss the information collected through in-depth interviews.

## 4.3. Quantitative Research Results

A survey, with a standardized questionnaire, was conducted in Yerevan and marzes of Armenia. And as stated above, the survey sample comprised total of **300 SMEs from the above-mentioned five industry sectors**.

The objective of the survey was to examine the following trends among the enterprises of the five industrial sectors:

- the type of services offered,
- production challenges of imported and exported materials, their potential and difficulties,
- the capacity for innovation,
- the capabilities of the technical resources,
- human resources and their demand,
- the expected support from the Government and industry-related unions and associations.

About 30% of the enterprises that participated in the survey were from the food industry, approximately 20% from the machinery/equipment engineering industry, and 15% were from the textile industry. The enterprises in the metalworking, pharmaceuticals, and gold-smithing/diamond smithing industries each made up about 10% of the total (see Table 1).

**Table 1. Enterprises that participated in the survey according to the sector of activity**

<b>SME sector of activity</b>	<b>%</b>
Solar technologies	4.4
Pharmaceuticals	10.0
Metallurgy and chemical industry	8.9
Machinery/Equipment engineering	17.8
Gold-smithing/Diamond smithing	12.2
Light / Textile industry	14.4
Light / Leather industry	3.3
Light / Food industry	27.8
Other: Information technologies	1.1
<b>Total</b>	<b>99.9</b>

The majority of enterprises, i.e. 75% had been founded since 2001, and only 10% were founded between 1928-1990 (see Table 2). Around 93% of the enterprises that participated in the survey have not changed their field of activity since the establishment.

<b>Table 2. Participating enterprises arranged by year of establishment</b>	
<b>Year of establishment</b>	<b>Enterprises %</b>
1928-1955	3.3
1970-1990	6.7
1991-2000	13.3
2001-2010	35.6
2011-2021	<b>38.9</b>
Respondents who face difficulties in answering	2.2

The majority of enterprises (54.4%) were characterized as small enterprises, 28.9% as medium-sized enterprises, and 16.7% as large enterprises.

More than half of the surveyed enterprises, i.e. 52%, consider their products the most competitive, and 21.1% sufficiently competitive. However, only 52.2% of enterprises have a scientific team developing product innovations or new products, and another half of companies works without a scientific team (see Table 3).

<b>Table 3. Percentage of enterprises with a scientific team developing innovations</b>	
<b>Enterprise has a scientific team</b>	<b>%</b>
Yes	52.2
No	45.6
Unaware/ Refuses to respond	2.2
<b>Total</b>	<b>100%</b>

About 67% of enterprises have a certificate of production quality, 33.3% have ISO quality standard certification, 15.6% have CE certification, and another 17.6% have other quality certifications.

Regarding the technical park of the enterprises, the research team studied the obsolescence, i.e. how outdated or modern was the equipment of the enterprises, both for the core/primary and auxiliary/secondary-related equipment.

In more than half of the surveyed enterprises, the age of the most important production-related equipment does not exceed 10 years.

Moreover, about 33% of both primary and auxiliary equipment used in the main production process are 1-5 years old, and about 23-25% - 6-10 years old (Table 4). However, critical and auxiliary equipment in 22-25% of enterprises are quite old, over 16-50 years old, which in turn makes it difficult to improve production, slows down development, and prevents the reduction of production costs.

**Table 4. Percentage of enterprises according to the age of important and auxiliary equipment used in production**

Equipment age	Enterprises %	
	Important equipment	Auxiliary equipment
1-5 years old	31.3	34.5
6-10 years old	23.1	24.6
11-15 years old	16.5	12.0
16-20 years old	9.9	9.2
21-30 years old	8.8	10.6
31-50 years old	7.1	2.8
More than 50 years old	1.6	0
Unaware/Refuse to respond	1.6	6.3
<b>Total</b>	<b>99.9</b>	<b>100</b>

The majority of production-critical equipment was produced in Germany (20%), China (12%), Russia (14%), the former USSR, Armenia, and Italy (7% each).

Table 4 demonstrates a clear picture. Primary and auxiliary types of equipment used in the production of enterprises are of similar antiquity. This indicates that if the enterprise modernizes its technical park, the modernization is done comprehensively for the entire production, updating both primary and auxiliary devices. Conversely, if an enterprise can't modernize primary types of equipment, the supporting devices naturally also stay old and are not updated.

Many enterprises in Armenia are unable to use the **full potential of their production capabilities for various reasons**.

As shown in table 5, the lack of specialists (30%), outdated equipment (12%), the small size of an enterprise area/space (8%), and system-wide market issues, such as low consumer purchasing power (11%), limited market demand (7%), are the main factors impeding the expansion of production capacity in enterprises.

**Table 5. The main difficulties affecting production capacity in enterprises**

Production capacity challenges	Enterprises %
Lack of specialists	28.7
Equipment age /slow performance/	11.5
Low consumer purchasing power	10.7
The small size of an enterprise area	8.2
Limited local market demand	7.4
Improper infrastructure	4.9
Low accuracy of the equipment/the product produced often deviates from the standards/	2.5
The existence of a shadow economy	2.5
Other	7.3
There are no difficulties	4.9
Unaware/Refuse to respond	11.5

Only 30% of the enterprises use 81-100% of their current equipment, and approximately 25% use only up to 40% of the equipment (Table 6).

In other words, enterprises are not making the most of the resources now accessible in their technology park.

Even more, only 20% of enterprises are using high-productivity equipment to their full capacity, i.e. 80-100% capacity. During production, 60-100% of the process is repetitive in 33.4% of enterprises. Lack of specialists and equipment prevails during 1/3 of the production process.

**Table 6. Percentage of enterprises according to the amount of implementation of various production resources.**

Type of production resources	Percentage in the production process					Unaware
	1-20%	21-40%	41-60%	61-80%	81-100%	
What % of total equipment is involved?	16.7	8.9	7.8	13.3	28.9	24.4
What % of the capacity of the high-performance equipment is being used?	17.8	5.5	8.9	13.3	20	34.4
What % of the production process is repetitive?	13.3	6.6	7.7	10	23.4	38.9
In what % of the production process is repetitive manual work required?	28.9	14.5	10	5.5	6.7	34.4
In what % of the production process is there a lack of specialists?	34.4	10	10	3.3	4.4	37.8
In what % of the production process are equipment shortages observed?	37.8	15.6	6.7	1.1	2.2	36.7

Taking into account the current production capacities of the surveyed enterprises, almost 67% of the enterprises can expand the production volume, and 22% of the enterprises can expand the production volume by 51-100% in the same period of production (table 7).

**Table 7. Percentage of businesses based on the size of a potential increase in production**

The extent of production expansion	Enterprises %
0%, cannot be expanded	1.1
1 –10%	4.4
11-25%	13.3
26-50%	27.8
51-75%	12.2
76-100%	10.0
More than 100% (triple, quadruple, etc.)	3.3
Unaware/Refuse to respond	27.8



The following were mentioned by the enterprises in their recommendations for actions the Government can take to encourage the modernization of equipment in businesses:

- offering low-interest rates and loan subsidies,
- leasing programs,
- making investments,
- offering customs or tax benefits for the enterprise in case of modernization,
- general orders,
- organizing study tours on new technological developments abroad,
- developing mechanisms/ grants promoting cooperation in the development or use of equipment among enterprises,
- making equipment modernization a requirement for investments,
- providing details on manufacturers and cutting-edge machinery,
- providing information on innovative equipment and manufacturers,
- providing information about equipment suppliers.

To stimulate investment in the five industry sectors studied, the companies that participated in the survey indicated the following recommendations to the Government:

- to subsidize investment loans,
- to ensure investments,
- to expand leasing,
- to support local and foreign investors in the industrial sector,
- to implement stabilization and subsidy of foreign exchange rate maintenance,
- to provide subsidies for ISO and CE quality certification issues,
- to provide investors with state guidance at various investment stages/
- to make available/provide investors with the necessary infrastructure and permits,
- to create property access to potential investors in communities (e.g. access to land, space).

Among the barriers in the exporting process, enterprises mainly mentioned the insufficiency of fast and cheap cargo transportation, lack of export damage insurance, lack of sufficient quantity of products, non-compliance with ISO or CE quality standards, lack of marketing information about the foreign market, difficulties in participating in trade networks / electronic platforms, etc. and limitations.

Therefore, the enterprises expected the Government of Armenia would provide the following types of support to promote exports:

- Subsidy of export credits,
- Leasing extension,
- Export insurance,
- New inter-state agreements for export trade,
- Development of commercial representations,
- Subsidy in ISO and CE certification of quality,
- Knowledge of international markets,
- Attaching domestic and international consultants to enterprises for global consulting,
- Assistance with funding for delegations traveling to foreign fairs and exhibitions,
- Scheduling of exclusive charter cargo transportation in accordance with the industry's seasonal patterns (charter flights, etc.),
- Awareness enhancement and consultation of intellectual property issues.

This study recorded quite interesting and unexpected trends in the human resources of enterprises studied. In general, when a company hires a new employee, the company estimates the time it takes for a new professional to adjust to the position measured in terms of human and hourly resources invested into the new employee adjustment process. In other words, how long it will take the company's employees to fully put onboard a new employee, and then how long it will take for that employee to reach the top level of workplace productivity. Usually, it takes 3 to 6 months for new

employees to be on-boarded, and according to Gladwell (2008), 10,000 hours of work are required to perfect a skill, which is 3.5 years for an 8-hour workday. That is the reason why there is a lot of expensive and unwelcome staff turnover.

That is the reason why frequent staff turnover is an expensive and undesirable phenomenon for organization. That is because training a new staff member requires human resources and time away from the company's staff, which translates to having the time of the existing human resources not used for increasing the production of the company. This is a global trend.

In Armenia, however, the majority of surveyed enterprises (70-75%) claim that an administrative employee needs 3 months to get settled in the enterprise, and a core professional needs up to 6 months (see Table 8). There are a number of logical reasons for this shorter time periods reported by companies.

It is possible that the overall quality of the workforce in Armenia is low, and the quality of performance required in the workplace is also low. Thus it takes less time the new staff member to meet that 'low average' performance level.

Another explanation could be that since employees in Armenia change jobs more frequently, staying at the same job for a shorter period (1-3 years as opposed to the typical 5-7 years in Western countries), then perhaps the frequent staff turnover restricts the period, where the average adjustment period is shorter than in Western countries. Additionally, since employees of the company keep changing, the work performance nature in a particular position is also low.

**Table 8. Percentage of enterprises by the period required for a new employee to be on-boarded at a particular enterprise and in a particular industry.**

Type of work	Period							Unaware
	1 month	2-3 months	4-6 months	7-12 months	1-3 years	4-6 years	More than 7 years	
An administrative employee in a particular enterprise	30.0	38.9	6.7	3.3	1.1	2.2	13.3	4.4
A member of a professional team in a particular enterprise	21.1	28.9	20.0	7.8	4.4	1.1	2.2	14.4
The expected period a professional in a particular industry should have worked before he becomes an expert in his field.	19.1	16.9	18.0	10.1	14.6	3.4	4.5	13.5

More than half (54%) of the enterprises that participated in the survey indicated that the expected work experience of a specialist working in the specified industrial field is up to six months. Only 14.6% of business owners anticipate a specialist to have 1-3 years of work experience to become competent in the field. In terms of finding a specialist (Table 9), the most common issues are the workforce's poor level of work performance (31%), employees' higher wage expectations (19%), frequent workplace changes by employees (8%), and the unattractiveness of work in certain regions (6%).

**Table 9. Difficulties in finding a specialist according to the survey respondents' data provided.**

<b>Difficulties</b>	<b>Enterprises %</b>
Poor level of work performance.	31.1
Employees' higher wage expectations.	19.0
High staff replacement, and the lost investment in the employee made by the company.	7.8
The venue of the company is not attractive (they prefer to work in the city/Yerevan)	6.0
Lack of resources to train a new employee according to the job specifics in a particular industry	0.9
Unaware	1.7
Refuse to respond	33.7

Engineers, sales managers, technologists, and chemists were mentioned as being in high demand by business owners.

To summarize, collected data show that **the five industry sectors under study shared similar challenges**. In other words, **the issues weren't unique to the identified industrial sector but were rather systemic and inherent to the economy of Armenia in large**.

# 5. SUMMARY OF DATA BASED ON FOCUS GROUPS AND IN-DEPTH INTERVIEWS WITH SMEs AND INDUSTRY EXPERTS

The research team aimed to examine the specific potential and development dynamics of a specific economic/industrial sector through focus groups and in-depth interviews. Since the subjects of the focus groups and in-depth interviews are connected, the findings of these research components are presented jointly in this section, organized for each sector of the industry studied in this research.

To remind the reader, this study was designed and carried out with the logic that it will be used by the Government of Armenia in the process of developing an effective toolkit of state support mechanisms for the growth of particular economic sectors of Armenia.

This study aims to support the development of the Government's toolkit for economic development, enhance current strategies, and encourage sustainable entrepreneurship and employment in Armenia by assisting to developing targeted strategies for various economic sectors of Armenia.

This logic is also reflected in the research methodology, which consisted of quantitative surveys with enterprises, focus groups, and in-depth interviews with entrepreneurs, as well as the findings presented in this report.

Hence, we don't discuss industry development statistics or summarize other organizations' research. We attempt to present the opinions of the business owners in a particular industry regarding the issues facing that industry's sector of the economy and how the Government can assist with its resources to ensure that the currently available tools are truly effective in advancing that industry.

Since all the five sectors of the economy studied in this report also relate to various services--**accounting, legal services, information technology**, then In focus groups and in-depth interviews we discussed these services and have integrated them in the general discussion of the study's findings.

## 5.1. Metallurgy, Mining and Chemical Industry

### 5.1.1. Sector Characteristics

- Armenia is a rich source of raw materials for mining (e.g. basalt stone) and metallurgy (copper, molybdenum, iron, zinc, lead, gold, silver, aluminum and other rare metals) industries. Minerals and massive amounts of ferrous and non-ferrous metal scraps are also present in Armenia and are used as raw materials.
- The growth of mining is related to the development of metallurgy because mining should produce concentrate for metallurgy that is both affordable and of high quality. The development of the chemical industry can be a certain stimulus for the interconnected development of the sectors.
- Mining is independent of other industries. However, the growth of Armenia's chemical industry and the production of **electrotechnical equipment, particularly electric cables, will support the growth of both mining and metallurgy.**
- The **metallurgical sector** has been fully privatized and is mainly dominated by foreign investors.
- **Basalt fiber, which serves as a raw material for composite materials sold in domestic and international markets,** is one of the **main products in the stone mining industry.**

- When compared to similar imported products, basalt fiber is the most cost-effective and high-quality raw material for composite materials.
- A significant part of finished and semi-finished goods are also exported.
- The equipment in the field of stone mining is generally available.
- The production of other goods based on basalt fiber is significantly dependent on equipment imported from abroad, about 90% of the necessary equipment is purchased from Europe, specifically Germany, the Czech Republic, and Norway, and only 10% is purchased in Armenia.
- **The domestic market for the metallurgical industry is quite small.** And this is one of the reasons why business entrepreneurs in this field prefer to export concentrates (except for iron and aluminum concentrates), semi-finished products, or pure metals, which are in high demand abroad.

- However, the added value of this industry sector is produced abroad when the concentrate is exported.
- The products from raw materials, or the added value, must be developed in Armenia for the metallurgy sector to advance in Armenia.
- Small industrial volumes, the scarcity and high cost of energy and water resources, as well as the high cost of production, high export costs due to road blockages, and the absence of powder metallurgy are all barriers to the growth of this sector.

In particular, a lot of mining and metallurgical industries use a lot of electricity in their processing. Therefore, it is impossible to maintain low production costs without affordable electricity; consequently, a high cost reduces competition, particularly in the case of exports where transportation costs also rise.

- Another important barrier to development is the lack of specialists, especially material scientists.

- Since foreign investors have largely privatized Armenia's metallurgy industry, these investors are more often reluctant to fund the training of specialists in this field, which would help the industry grow.

- In Armenia's higher and technical institutions have no or few opportunities for training and enhancing the skill level of relevant specialists, such as material scientists, chemists, and mechanical engineers.

- E.g., even though **the National Polytechnic University of Armenia (NPUA) trains specialists in metallurgy, their number is extremely low and does not meet current requirements.**
- In focus groups and in-depth interviews, one of the most frequently cited factors for the development of the field of metallurgy was materials science. However, **as a result of the lack of state assignments, NPUA does not graduate specialists in the field of materials science.**

- The main specialists needed in the field are automatic control system specialists, material scientists, furnace specialists, stonemasons, mechanics, energy specialists, electricians, ecologists, textile specialists, chemists, technologists, builders, programmers, economists, marketers, human resources specialists, lawyers, etc.

### 5.1.2. Development Opportunities and Perspectives

As mentioned by the business owners of this industry, it is essential **to develop and ensure the operation of the second and third levels, i.e., obtaining new materials and pure metals through foundries and metal refining, to develop the mining industry.** As a result, a wide range of pure metals and materials can be obtained. The latter will also **contribute to the development of chemistry in Armenia, the production of cables and glitter and, finally, the development of**

**materials science**, which is in high demand globally and is considered a crucial prerequisite for the development of various industrial sectors.

The production of basalt stone, with its inherent peculiarities and complications, can further open up a vast field of innovation (new productions) for start-ups, particularly **in the production of composite materials based on the basalt thread production base**.

**Although the market for basalt rebars made in Armenia is small**, there is growth potential. It is primarily brought on by the shift in standards for urban development. Basalt rebars can be used in the construction of hydro structures, tunnels, hydropower plants, roads, energy-efficient civil construction, greenhouses, and other infrastructure projects being built in Armenia due to their special qualities and low cost compared to metal.

**Approximately 1,350 tons of basalt plastic rebar (this amount is already produced by one of the Armenian companies, Armbasalt CJSC) can replace about 12,000 tons of metal rebar, thus reducing transportation and installation costs. Moreover, due to the lack of corrosion, the costs of maintaining and repairing concrete structures will also decrease.**

In addition, basalt continuous **fiber cloth can be used to create various composite materials that are used in a variety of industries, including nuclear power engineering, drones, and various military implementations**. The use of both international and local components in assembly production can also be encouraged through state incentives or other state support mechanisms

In various branches of industry, it is essential **to promote the use of mining and metallurgy technologies and materials, particularly the use of composite materials**.

For instance, to use the potential of this sector for the production of car bodies, wind farm blades, and thermal insulation materials.

By replacing the interior cloth covering of cars with more fire-resistant cloths made from composite materials, particularly basalt stone thread, the same materials can be used as heat and sound insulators.

Rebars made from composite materials, such as basalt stone, can be used in place of metal rebars in the construction of greenhouses, roads, and other agricultural structures.

Investments should be made in acquiring and developing new technologies that will increase the level of metal recovery, reduce the cost and raise quality to develop metallurgy products.

**Therefore, processing concentrates in Armenia and exporting pure metals (currently, concentrates are exported, including gold and silver) are crucial for the development of metallurgy**. Business owners insist that the Government should at least encourage them to obtain high-demand composites and products from the concentrate and export these metals, not just the raw concentrate, in cases where it is not possible to process/obtain pure metals in Armenia.

In this case, **the added value of the concentrate will be obtained/remained in Armenia, allowing for the export of the pure metal produced at a higher price, thus also boosting Armenia's metalworking industry**.

Therefore, as entrepreneurs claim, it is crucial:

- To restart cathode copper production in Armenia, where the amount of concentrates available allows for the annual production of 92,000–95,000 tons of cathode copper.
- If a copper smelter is built, the Government of Armenia can make arrangements for the copper concentrate producers to agree not to export the copper but rather to sell it to the copper smelter.

- The hydrometallurgical method of copper production must be promoted to extract copper from oxidized minerals.
- The entire production and processing of gold and silver must be promoted (at the moment, only the concentrate of these metals is produced and exported in Armenia).
- Stimulate the use of iron deposits, which will allow for on-site steel production and satisfy the requirements of Armenia. Metalworking facilities in Charentsavan are fully capable of handling production.

### 5.1.3. What Kind of Support from the Government Toolkit Might be Helpful?

According to focus groups and in-depth interviews, the Government supports development and investment in the mining and metallurgy sector, but the progress of support is very slow and out of step with other factors affecting the sector's development.

Customs duty waivers to promote import volume, VAT refunds, and state subsidies ranging from 12% to 7% of total credit are examples of effective Government support. Entrepreneurs, however, have higher expectations of the Government, in particular:

- The businessmen stated that the Government should provide an opportunity for the enterprises to effectively cooperate in the construction works of state significance within the framework of the normative acts in force and implemented in a particular sector for the enterprises of this sector to have financial stability.

***In particular, the establishment of a legislative and normative base by the Government will enable the enterprises to sell 30% of their basalt products on the Armenian market, resulting in stable working capital for the companies.***

- Stone mining enterprises expect opportunities from the Government **to promote and present basalt fiber products as composite materials, at local and international fairs under state support, or to present products and product raw materials abroad through chambers of commerce.**
- Some equipment is very expensive. **If equipment procurement is supported, the product line will be broadened, e.g. by exempting enterprises from import duties and taxes on equipment and other technical devices.**
- **The sustainable production of basalt fiber and the use of basalt plastic reinforcement in the field of construction is a relatively new development in Armenia.** Consequently, to advance this industry, it is essential to establish a training base for both the manufacture of the thread and the training of specialists for the production and testing of various composite materials based on it.
- **In Armenia, the metallurgical industry, mining and the field of materials science are in crucial need of qualified specialists.**
- To train qualified specialists, investments are also needed from the owners of the sector. **For example, businessmen can compensate the tuition fees for specialists in this field, upgrade the laboratory base of a particular university, or create a suitable laboratory in the related university, etc.**
- Factories also expect that the Government will establish or maintain the ability to apply for and receive loans with preferential terms.

- **It is currently highly relevant to establish a special industry development fund.** This fund can promote the use of technologies and materials in various industries.

## 5.2. The Pharmaceuticals

### 5.2.1. Sector Characteristics

Since the 1990s, the production of drugs in Armenia has not been developing. Generic/reproduced drugs are produced. However, **the pharmaceutical industry is high-tech one that is dynamically expanding in Armenia** and one that will require significant development funding.

- A number of well-known drugs can be produced in Armenia. However, these drugs are patented for 10-15 years, which makes production difficult in the long run.
- According to the entrepreneurs, the pharmaceutical industry currently generates an output of about \$25 million, of which about 60% is exported, and 40% is sold in the domestic market.
- According to the companies of the sector, the volume of domestic market demand can be estimated at nearly US 150 million dollars. If the consumption of illegal drugs is also included, the local demand will be around US 400 million dollars.
- Currently, drugs in Armenia are produced mainly by granting local production licenses to international brands, which does not contribute to the creation or development of Armenian brands.

**Educational/professional and production issues** should be separated in the development of the pharmaceutical sector.

- Importing raw materials brings many challenges in the field of pharmaceuticals. It has long been a part of customs. Since the imported raw material is a chemical component used in drugs, it is sent to an expert center to be identified as either a drug or a chemical element. Because of the lengthy nature of the process, both time and money are wasted. The current bureaucracy generally interferes excessively and obstructs necessary progress in all areas.
- Redundant administration creates a serious barrier to import and export. There is currently no expertise in Armenia for virology in the pharmaceutical industry. It is implemented only in the Russian Federation. When exporting, the businessman is required to send his sample to Russia for inspection, which is a more formal inspection.

Since 2012, the Ministry of Health of Armenia has established an expert laboratory, but it still has issues and cannot perform virological expertise. Pharmaceutical companies lack the significant financial resources necessary for international certification. The complexity of these mechanisms discourages export.

**The idea** is to draw on the successful experience of Russia, when in 2012 the President of the Russian Federation signed a law according to which 50 % of the costs of exported drugs were paid by the state, including all costs except wages. This support has boosted drug exports in Russia.

- **The pharmaceutical industry requires ongoing training of specialists' skills**, which is currently carried out by pharmaceutical companies with their resources, mainly abroad. This requires a significant financial contribution.
- **In terms of training specialists**, a number of universities are training pharmacists. E.g. Heratsi Medical University of Armenia, Yerevan State University, Haybusak, Armenian Medical Institute have pharmacology departments.

However, **the above-mentioned universities do not prepare the necessary technologists/personnel for the production of drugs, since the graduates mainly provide the pharmacy service network.** This creates certain difficulties for drug production.



- Additionally, rejuvenating the workforce in the relevant state agencies is another barrier to the growth of the pharmaceutical industry. **Almost all department managers are incompetent or illiterate**, and the financial, economic, and health sectors all lack professionalism. In general, there is a big shortage of personnel in the field, and among professionals educated in vocational educational institutions, even the bare minimum of knowledge is lacking.

## 5.2.2. Capacity for Pharmaceutical Development and Government Support Strategies

Sector enterprises observe that investing in **short-term production is pointless and will not pay off**. And only **due to long-term state support** (preferential taxes, loans, subsidies, etc.), it is possible to engage in the long-term production of medicinal raw materials.

- Companies and industry experts state that **developing new medicines in Armenia is both unnecessary and unachievable in the near future** since to design a new medicine for the entire cycle, at least 1-1.5 billion US dollars are needed. dollar.

- Pharmaceutical industry experts recommend that Armenia try to invest in branches of a number of well-known international pharmaceutical companies to develop pharmaceuticals, following the model of Russia.
- It is possible **to start producing some drug-related raw materials in Armenia**, and according to the experience of AZAD company, some of these raw materials are already being produced. However, **local production is a labor-intensive, challenging and expensive business process** that requires new specialists and expensive technologies.

- **According to pharmaceutical companies, experts, and industry studies (IFC 2021), the priority of the pharmaceutical industry should not be to import drugs, but (1) to have its pharmaceutical products to meet the needs of the people, and (2) develop human capital in the pharmaceutical industry, which will have a multiplier effect on the population as well, contributing to the development of human capital, health, and education, at the population level.**

- **Own production of drugs can be promoted through rebranding or franchising, if there is no own brand of drug production.**

- In the case of efficient development of pharmaceuticals in Armenia, it is possible to enter the Eurasian market at competitive prices, and in case of inclusion in the EURASES system, it is easier to enter European countries.
- For Armenia to develop the production of drugs of strategic importance and the most necessary for the population, **Armenia should have its brand drugs**.
- **For the development of its brand of pharmaceutical production, Armenia is very rich in medicinal plants:** there are more than two thousand medicinal plants.
- **But medicinal plants are presented in the market of Armenia and abroad mainly as teas, not as medicines.** This limits the potential of Armenian production of medicines.

**According to entrepreneurs, Armenia can brand its natural medicinal plants as medicines** due to its unique and rich medicinal plant world, as well as the fact that these plants are ecologically clean. **Armenia has a special potential for the development and export of**

**Armenian "Made-in-Armenia" brands when it comes to herbs. It will take a lot of labor force to develop and mechanize this sector of production, as well as to educate people about the best ways to combine different kinds of plants, acknowledge risky medications, etc.**

For the development of pharmacy, it is crucial to develop a package of benefits and make it available to all market participants.

## 5.3. Gold-Smithing and Diamond-Smithing

### 5.3.1. Sector Characteristics

According to the estimation of the companies operating in this sector, up to 400 million USD in jewelry products (including gold ore) are produced. Nearly one thousand jewelry enterprises (individual entrepreneurs, LLCs or OJSC) and 5-10 diamond-making enterprises operate in Armenia. The industry employs nearly 10,000 people.

In the gold/diamond production chain, the most complicated part is setting the stone. And, in general, the most difficult in the field of jewelry is exporting.

According to entrepreneurs, in the past 5-6 factories in Armenia processed and exported processed **diamond** stones equivalent to about 360 million US dollars, of which 300 million was the raw material, and 60 million was the added value obtained as a result of the work performed. Currently, Armenia has lost its markets abroad as foreign orders have moved to countries where labor and cost are cheaper. India produces 90% of the world's diamond production and has about 2 million stone specialists in this field.

Today, Armenia produces rather gold ore than pure gold.

One of the important issues in the development of the sector is export promotion. Most of the products are exported. Logistics problems are a serious barrier to exports. Currently, attempts are being made jointly with the EAEU to establish a Eurasian Jewelry Export Bureau, which should deal directly with export issues.

The main export countries are the USA, Russia, Germany, Belarus, and Moldova.

High customs duties and taxes are another barrier also. Many of the large countries impose high customs duties and taxes on imported goods, thereby increasing the price significantly and making it difficult to sell abroad.

It is important to note that although Armenia exports nearly 3-5 tons of gold alloys, the raw material of gold, however, is purchased from abroad.

Moreover, jewelers buy gold through banks at a price higher than the market price. This is explained by the fact that it is not possible to buy gold at a low price and in small quantities (2-3 kg) from the market. This creates a high product cost price which affects competition.

Currently, only 1.2% of the customs duty on imported diamond products remains in Armenia. The remaining 8.8% is transferred to EAEU countries in line with EAEU regulations.

There are no major problems with the sale of the product in the domestic market. However, the VAT set for jewelry in Armenia is 20%, which is higher than in a number of countries, including neighboring Turkey or CIS countries, and increases the price of the product and makes competition complicated.

One of the primary barriers to the development of the sector **is the lack of specialists. Jewelry, in fact, is an engineering profession**, however, **educational institutions, as well as vocational educational institutions, do not have departments for training specialists in the sector of jewelry according to industry experts. The training of labor specialists for production is also missing, which is crucial in its turn.**

### 5.3.2. Capacity Development of Gold-Smithing and Diamond-Smithing Industry and the Government Support Strategies

Industry experts claim that Armenia has the capacity to process diamond products worth up to 40 million US dollars and up to 80 million US dollars at most. However, **there are no prospects for the development of the diamond-smithing industry in Armenia as a separate branch. It can only be developed when jewelry is linked.**

Perhaps, the jewelry industry in Armenia can be promoted not based on industrial gold-smithing but with stencil large-scale production, which has a limited value being considered as a stencil production. Since Armenian gold-smithing has been known for the distinctive handiwork of high-quality Armenian craftsmen, **the jewelry industry in Armenia can be promoted based on the development of the unique design branded as "Made-in-Armenia" jewelry.**

According to the assessment of the industrial enterprises, the total volume of products produced in Armenia can be increased to nearly 350 million US dollars **while developing jewelry**. And in that case, on average, 50 million USD equivalent orders will arise **for diamond makers**. In other words, the total volume of valuables will reach 400 million USD. This amount does not include the export of Armenian gold ore.

In this case, the number of workers (employees) in both the gold-smithing and diamond-smithing industries will increase dramatically and will reach at least 50-60 thousand. And the number of diamond makers will reach 500-600 (previously this number was about 5000 people). Currently, nearly 20,000-30,000 people are employed in the gold-smithing industry, and 200-300 people in the diamond industry.

As the jewelry industry in Armenia gradually develops, the demand for orders for various stones, including diamonds, will increase.

The Government does not demonstrate a particular approach in terms of promoting the development of the gold-smithing and diamond-smithing industries. From time to time, the Government provides direct support, for example, the Deputy Minister of Economy of Armenia supplied a certain amount of rough diamonds from Yakutia to Armenia. However, entrepreneurs claim that there is no systemic approach.

- Gold-smithing is popular in the Diaspora. **But in Armenia, the personnel base in gold-smithing is developing spontaneously.**

- To increase the quality of the gold-smithing industry and to promote the use of semi-precious stones, a jewelry school is offered to create aimed at the combination of stone colors with different metals (gold, silver, etc.) and stones, and other related knowledge base development, formation of individual masters, and quality improvement.
- **High-quality unique works should be shown both in Armenia and abroad, and they should be supported by the state.** A good example can be **the street of goldsmiths' boutiques on Ponte Vecchio in Florence, Italy**, which is a street of boutique shops of individual goldsmiths and their workshops. **This model can be also used by Armenia to encourage the presentation and sale of unique, high-quality works there.** This concept differs from the notion of the "gold market" in that it centers on distinctive, as opposed to mass-produced, individual works of top-notch craftsmen. A clientele of exceptional works should be established for such high-quality works (during the Soviet era, there were specialized art salons for the sale of individual high-quality works). **This elite clientele should be created by varying marketing and sales opportunities, such as using the Ponte Vecchio model or, for international markets, by leveraging the network of embassies** and catalog marketing for the unique works of Armenian masters.
- Since gold-smithing in Armenia develops at the individual level, the individual takes care of and takes all the risks of the delivery of his work. **An institutional solution should be given to the delivery of individual goldsmiths' products.** Thus, **transportation and logistics are one of the most pressing issues for reducing risks in the jewelry industry.**
- Along with gold-smithing, **the use of semi-precious stones should be promoted not only in the field of individual work but also to diversify the use of semi-precious stones in other productions outside of gold-smithing.** For example, better use of the capacities of the obsidian. All these measures can be done **for the development of a "Made-in-Armenia" unique art brand.**
- If gold-smithing is to be promoted based on the development of the brand of **"Made-in-Armenia"** individual unique works, then it is necessary to invest and promote **the jewelry sector as an industrial cluster: the materials used (stone, thread, glue), tools, design, packaging, delivery, which need quality improvement in Armenia. In Armenia, there is a production of various gold-smithing tools (Laser LLC), which significantly creates beneficial conditions for individual jewelry making.**

## 5.4. Light Industry: Food Industry

### 5.4.1. Sector Characteristics

- According to the enterprises of the agricultural sector, the food and raw materials produced for their own needs in Armenia make up about 30% of the agricultural output. This applies to dairy products, meat, some vegetables, vegetables and fruits. Another part of the product is sold as a processed product or in the form of primary raw materials.
- Fresh milk comes from Armenia while powdered milk is imported into the dairy industry. Armenian water is used in the production of mineral water, and almost all of the additional components, such as glass bottles, labels, printed cardboard boxes, and glues, are imported.

- The representatives of the businesses underline the importance of the fact that, while raw materials and goods of vegetable origin are almost entirely exempt from the need for appropriate inspections, **meat and meat products are partially subject to mandatory**

**inspection in the local market.** In the markets, both wholesale and retail, neither individuals nor organizations are abiding by phytosanitary regulations.

- **Inspection is also lacking in exercising the necessary control over applying pesticides and fertilizers.**

- Armenia **lacks the technology necessary to produce high-quality glass bottles (NNPB - thin-walled and light glass bottles, which allow for the largest cargo loading in a single export unit).**

- **When the design productivity is high, the company's production of plastic molds and bottles operates at a small capacity**, indicating that only a small portion of the equipment capacity is used. **Long-term layoffs affect some professionals at those enterprises**, but they are still paid by the employers to keep them around.

- The mineral water product is sold at dumping prices on the domestic market, maintaining nearly the same level of prices as competitors' products with the same name or a similar function.

- Armenian mineral waters are sold alongside Italian, French, German, and other well-known brands considered premium in the world and at comparable prices when exported (but not within the Eurasian Economic Union).

- Armenia mostly exports canned goods and dried goods.

**For food exports**, product volumes are important. From the point of view of increasing the volumes, the following is considered to be a barrier:

1. **Incomplete security of necessary quantities of the product.** Although in recent years the Ministry of Economy of Armenia has implemented state support programs for the introduction of small and medium-sized greenhouse farms, the establishment of intensive grape orchards and orchards cultivated with modern technologies in Armenia, and due to them, the number of crops grown in the closed ground has increased, it is still too early to talk about quantity, seasonality, fixed prices of products. And the above-mentioned support program for grapes has **the danger and risk of pushing local endemic varieties out of the market.**
2. Product **quality** defects.
3. **A wide geographic allocation** of products and raw materials.
4. **Insufficient number of logistic hubs.**
5. **Transportation issues** caused by weather, administrative, and other factors, particularly at the Lars checkpoint.
6. **The variety of exported food products and raw materials is limited.** There is a demand to introduce more lucrative concepts, which is a problem. It refers not only to the application of sophisticated technologies but also to the use of conventional techniques as new and creative means of generating additional income.
7. Because dairy products are perishable and delays in export, such as traffic jams on the Upper Lars road section, directly affect the product's sales volume abroad, **the transportation length is crucial when exporting dairy products.** The main destinations for dairy exports are Georgia and Russia.

- The volumes of agricultural products are related to the following problems that have not been solved in agriculture for 3 decades: the large volume of uncultivated land, the insufficient condition of irrigation systems, the insufficiency of the introduction of green technologies, the insufficiency of consultations in the agricultural sector, etc.
- **There is an acute shortage of specialists in the field of food production.** Mechanics, electronics specialists, machine and assembly line operators and adjusters, programmers, agronomists, plant protectionists, veterinarians, animal nutritionists, refrigeration, food processing technologists, and various engineering specialists are in strong need.
- The lack of engineering and technical specialists is so noticeable that the enterprises of the sector are organizing short-term courses to train specialists. But this is not a solution for the development of the sector, and a systematic approach is needed.
- **Professionals in logistics** who lack or have little firsthand experience despite having a professional diploma (e.g. in the fields of supplies, cargo transportation, logistics, transport-forwarding services, optimal management, and service of the automotive industry).
- **There are no state or non-state independent laboratories that are available and specialize in procedures for product registration** (EAEU and EU declarations of conformity, certificates) and compliance with other requirements. There is also a shortage of personnel in the field of **certification**.
- **Information on export regulations in exporting countries is difficult to access.** And there are few professional consulting companies in Armenia, and businesses are unaware of them.

#### 5.4.2. Potential for Growth and Export, and its Motivation Factors

In the past years, a significant increase was recorded in the volume of food exports both to the EAEU and to the EU. An increase was also recorded in terms of products exported to the USA, where mainly dairy products, meat products, dried goods, and other products are exported.

To speed up and facilitate the transportation of food in the export process, the development of machine-building enterprises in Armenia will enable food and agricultural enterprises to supply/export using Armenian equipment and machinery.

- For export, it is necessary to distinguish whether it is exported to the ethnic market (which is the Armenian Diaspora), or to the non-ethnic market. Diaspora ethnic target markets are attractive and the Ministry of Foreign Affairs and Armenian embassies should be involved in expanding marketing among the Diaspora and increasing the recognition of Armenian products.

Entering the non-ethnic market is quite difficult. When entering a large commercial network, you must have a well-planned large-scale production without interruption, and in addition to production, you also need to supply large volumes without interruption. This is extremely challenging for Armenia, taking into account the logistical complications of the region and a number of other investment-related problems.

- Lavash is exported, has the potential to be exported, and has a unique niche in the international market.

- **Packaging creates value-added**, and in the process of both food production and export, emphasis should also be made on this fact, so that the product is sold at a higher price inside the country and abroad.

### 5.4.3. What Kind of Government Toolkit Support Might Be Useful?

Steps have been taken by the state to promote the development of the food sector. A predictable tax policy is a good example of a successful government policy, e.g. introducing VAT refund mechanisms or subsidizing wage credit in the food sector.

- However, subsidies and privileges cannot be effective in the long term. According to food and agricultural enterprises, **there is a lack of a unified and targeted strategy for the introduction of new equipment and new services in agriculture.**

Although in recent years the Ministry of Economy of Armenia has been implementing the programs "Interest rate subsidy program of loans for the purchase of agricultural raw materials", and "Agri-food equipment leasing support program in the Republic of Armenia", no significant reforms have been recorded in the agricultural sector. Meanwhile, according to the data published by state bodies, a large number of individuals and organizations have benefited from these programs.

To develop the sector, food industry enterprises made the following suggestions in focus groups and in-depth interviews:

- **Training of specialists is one of the most important issues.** The professions that are most needed in the field of the food industry have already been mentioned in this section.
- It is difficult for start-ups to enter the domestic market of Armenia because well-known brands are established there. When entering a local or new market, start-ups must demonstrate a highly flexible pricing policy and use innovative marketing tools. It is complicated considering the internal consumer mentality and incomplete product information. **Consequently, start-ups can be supported in the initial stages of entering the market as well.**
- In the food industry, enterprises supplying food to preschool and school educational institutions can be given privileges to promote their products.
- Problems arise from the lack of a rental certificate for the location of the activity in the area of public catering. On the one hand, it is significant that the registration is done online, on the other hand, a document is not available in hand, and the absence of a certificate creates a new issue that results in a conflict of decisions.

**It is proposed** that a sector-specific technical park should be created for enterprises in the sector, which will have equipment and trucks to meet the export requirements of that sector.

- The activity of the State Food Safety Service is not complete concerning food safety control, especially in terms of cheese, butter, meat, and other products. If the Government expands the capacities of this institution in the processes of food export and import, it will promote the development of this sector.
- There are almost no consulting institutes and companies providing support or any service in **the field of agriculture.** It is crucial **to establish similar organizations that can support and provide various services for entrepreneurs in the agricultural sector.**
- The demand for locally produced goods and consumer behavior is significantly influenced by large local retail stores like supermarkets. Local producers typically lack competition in supermarkets because the majority of the large display areas are rented by international brands, the supermarkets themselves use significant areas to sell their own imported products, and only the rest small areas are available for the products of local producers which remain out of sight and unattractive to the buyer. **There should be a system in place that allows supermarkets to give preference to local products or encourages them to offer local products.**

- **Exporting should not be an end in itself, but it should always be linked to the improvement and expansion of the quality of local products. In the domestic/local market, Armenian enterprises are not competitive either in terms of price or quality, especially compared to internationally recognized brands.**

Importers hinder the development of local products by selling the imported product at dumping prices, e.g. toilet paper and a variety of household products including detergents and more. **The Government should think of ways to protect local products and manufacturers.**

At the same time, **the promotion of local products should not be an end in itself, and in some cases, it is beneficial to import**, e.g. some raw materials and meat products. And the development of the local raw materials industry can be added in the second stage of development.

- **Transportation logistics** restrictions and transit time are considerable barriers to export, as food often spoils as a result of road traffic jams.
- In terms of export, the institute of distributors is considered to be a powerful incentive, which should be developed in Armenia, perhaps by educating/training specialists according to the fields.
- Exporters bear high risks, and these risks can be reduced by creating an export insurance system.
- Large expenditures are required to increase the recognition of brands abroad, including in the CIS, which local producers often cannot afford either technically or financially. For this purpose, the Government can engage and apply to reputable marketing and distribution professional organizations abroad to process these activities.

However, Armenian companies producing similar products must pool **their resources to pay these amounts and agree to have all of their goods branded as "Made in Armenia"**. For instance, small Italian entrepreneurs that export Italian leather goods function like that.



## 5.5. Light Industry: Textile and Leather Production

### 5.5.1. Sector Characteristics and Support Strategies

The textile production sector deals with imported raw materials. The raw materials are completely imported from Uzbekistan, Georgia, Turkey, as the prices are relatively cheaper there.

The textile sector is less dependent on other sectors as raw materials and auxiliary materials are mainly imported.

**The main obstacles in the field of textile production are the import of raw materials and the shortage of specialists.**

To start the production of cloth raw materials in Armenia, cloth production factories are needed. This requires large investments and is probably not attractive to businessmen.

A shortage of specialists is also a challenge. **There are no skilled workers, knitwear production technologists, or constructors.**

However, **changes in international currency make exporting risky** and have a significant adverse effect.

Exports of textiles are hampered by logistical issues.

Textile enterprises collaborate by placing orders with one another and providing support for one another.

The customs duty on imported raw materials and clothing will be waived or reduced by 50%, which will promote the growth of the textile industry. The current fee raises the cost of textile products by 8% to 12% and restricts competition.

Lack of production is one of the main obstacles to sustainable entrepreneurship and stable development. It is necessary to increase scalability (especially in the textile sector) and competition in the global market.

**Leather processing should be linked to slaughterhouses** as they have a civil culture of removing leather, which also promotes keeping the leather from getting dirty and maintaining its quality. Therefore, **the role of slaughterhouses in obtaining leather raw materials should be strengthened.**

Since the technology is expensive and the production is smelly, small businesses are more appropriate to promote leather production similar to that of a factory. Small productions away from densely populated areas will therefore be more suitable.

Armenia can **establish a leather fashion school to institutionalize specialized training for leather industry experts and revive Armenian traditions of leather production to promote leather production.** Sustainable training of specialists in the textile industry is also of vital importance.

## 5.6. Machinery/Equipment Industry

### 5.6.1. Sector Characteristics and Improvement Challenges

The machinery/equipment industry (laser technology, solar technology, information technology) is a very broad field. For example, laser technology, optics, optomechanics, optoelectronic devices, and photonics can be classified as one field. **But the internal market of this sector in Armenia is mainly based on the military industry.** And as a result, the sector does not have a consumption market in Armenia, and there are no competitors either.

- Laser glasses are completely imported as raw materials. For years, attempts have been made to produce several types of glass in Armenia, but so far there have been no results.

Growing glass crystals is very energy intensive. To make the production profitable, at least 5 furnaces need to be operated at the same time. And here, **the reduction of the energy fee for growing crystals will contribute to the profitability of the product**, and in turn, to the further development of the sector.

- Since the specialization of the field of laser technologies is narrow and the products produced in Armenia are of high quality and the labor force is relatively cheap, it is very competitive abroad.

But there are difficulties in the international market since Armenia competes with the dominant countries in this field: *China, India, the USA, Germany, and France.*

**There are barriers at almost every stage of equipment engineering:**

- There is a shortage of specialists in the product design phase, and this shortage is getting worse in this area.
- When making and testing a product prototype (constructive development), the necessary latest technologies are absent in Armenia, or if they are available, they are very expensive. Consequently, Armenian companies create/order prototypes abroad.
- Non-availability of necessary devices/parts during prototyping forces companies to import them, which sometimes delays the project by up to 6 months.
- Recycling in equipment engineering is also poorly developed, though attempts are being made, but progress is still weak.

### 5.6.2. The Nature of Development Potential

The development potential of the machinery/equipment industry is complex, complicated, and associated with a number of issues:

- shortage of specialists,
- lack of internal consumption market,
- export marketing,
- insufficient development of related areas,
- High cost of production in Armenia.

- Although the market for the machinery/equipment industry in Armenia is currently small, **this industry is connected to all others because it has applications across all industries.**

However, another factor contributing to the slow growth of this sector in Armenia is the country's modest demand.

Armenian enterprises in this sector primarily perform **piece production**. They are unable to produce **mass production**.

Business owners state that it will take years for enterprises in the equipment engineering industry to adapt their production processes for mass production in Armenia. However, because of the industry's rapid growth, even after a year, the product may be outdated.

**Start-ups in the machinery/equipment industry** have 2 challenges unique to the industry.

-- This field is very complicated for start-ups, because as a result of the lack of internal consumption/sales market, **as soon as the start-up business starts, it has to orient the product to the international market, and it has to take care of not only the production issues but also the marketing abroad, which requires additional financial resources.**

-- **Machinery/equipment start-ups** are unable to produce immediately at the initial stage of business, and **unlike programming-based start-ups, hardware start-ups need time for design work.**

-- In the field of Information Technologies, there is a high demand for technical specialists in Armenia (programmers, etc.). They are sector managers and content specialists (scrum masters, product owners, etc.). With the support of these specialists, innovative startups will start operating in the IT industry. Today, the IT industry in Armenia provides programming or IT services based on orders (about 50% of the sector operates like that).

**However, the IT market in Armenia can significantly enhance its potential and many well-known prerequisites for it already exist, if the order/service model is reinterpreted and transformed with the innovative principle of producing competitive production on its own in domestic and international markets.**

### 5.6.3. What kind of Government Toolkit Support Might be Useful?

During focus groups discussions with enterprises of equipment and information technology (IT) industries, entrepreneurs noted that the IT sector is supported by the state as a sector closely related to the equipment/hardware industry.

For example, at the suggestion of IT companies, amendments and additions were made to the Law on State Support of the Information Technology Sector and the Tax Code. As a result, since 2015, the provision of tax benefits to new business entities in the IT sector, in particular, a 0 percent corporate tax rate and a 10 percent income tax rate, have stimulated the establishment of new companies and employment in the sector. And if 16 IT companies were established before the adoption of the law, then after its ratification the number has significantly increased to around 4,000.

Numerous viewpoints regarding the development of the field were also highlighted during the focus group discussions and in-depth interviews.

- According to the viewpoints of the sector enterprises, to develop the machinery/equipment industry, it is crucial to promote the training of specialists and to simplify the process of importing raw materials.

- Tax benefits for at least five years can be offered for the establishment of each new company in marzes of Armenia to decentralize the IT sector and develop it there.

- **The development of high-tech industries requires a simultaneous rhythm of supply** so that sub-sectors can supply each other with products as raw materials or components. **Advanced and strong supply logistics are needed.**

- Currently, the IT sector of Armenia mostly provides orders from abroad. The development of this industry in Armenia will contribute to the promotion of internal demand in Armenia. However, the solvency of companies in other sectors (non-IT) in Armenia is poor. Therefore, the time that the IT company has to spend to fulfill the order of the local/Armenian enterprise is not favorable to the IT company. Additionally, because international orders pay well, the IT company is keen to accept them.

To encourage Armenian IT companies to accept local/Armenian orders, the Government should consider promotion strategies.

- Since equipment industry start-ups, in addition to production issues, also have to take care of selling products abroad (there is almost no consumption in the domestic market), tax and customs privileges will especially help start-ups in this area.

- Provide long-term preferential loans for all companies operating in the sector.

- The hardware industry is in dire need of specialists. According to industrial enterprises, **tuition fees for laser technology and related professions should be reduced as much as possible.**

- Enterprises also propose **to include in the school curriculum the awareness and emphasis on the importance of technical professions and to organize the recruitment and guidance of students with a technical mindset.**

- In addition, it is crucial **to create a military construction university**, taking into account that currently the knowledge of staff in the field is superficial.

- Laser technologies directly depend on the development of radio electronics and mechanical engineering, and so far these fields have not been sufficiently developed in Armenia to meet the requirements of the laser technologies industry.

As a result, the interconnection of fields principle should also be applied to the training of specialists.

- Since there is a great potential for specialists in the IT sector, the legislation should encourage the current potential to be used appropriately and in line with the situation.

- According to the entrepreneurs, **the Ministry of High-tech Industry fulfills its role incompletely and does not work in harmony with the Ministry of Defense**, since as a warring country, the need for appropriate military technologies is not formulated in tactical or defense directions.

Consequently, **there is no stimulation of innovation**, which could have happened **within the framework of military industrialization programs**. The reason is the incomplete cooperation of the two Ministries.

## 5.7. Recurring Proposals on Development of the Five Industry Sectors

The most significant finding of this research perhaps is that **the issues and development barriers that we heard from entrepreneurs we engaged with in this study, were similar** across all of the industrial sectors examined.

In this section we summarize those concerns and recommendations that were recurring among the entrepreneurs across all five sectors of the industry-- shortage of specialists, low production volumes, logistics problems during exporting, expensive imported raw materials or low-quality domestic raw materials, inconsistent or incomplete legislation, incomplete advice from the state, etc.

All these recurring concerns indicate **systemic problems of the economy of Armenia**. These problems are large-scale and have not been solved for decades. And enterprises are mired in these systemic issues instead of focusing on sector-specific challenges and competing among each other.

*These are the systemic issues that continue to consistently impede the growth of the Armenian industry across all sectors.*

- In some sectors of Armenia's industry: mining, metallurgy, food industry, and gold-smithing, **raw materials are exported. Since the final product from these raw materials is made outside of Armenia**, these industries' **added value is produced and maintained outside of Armenia**. It is crucial to think of mechanisms so that products from concentrate or raw materials can be produced in Armenia. That will allow to increase the value of the product and sell it at a higher price once exported.
- For the enterprises of a particular sector, a technical park specific to the industry can be established, which will have the equipment and vehicles needed to meet the export requirements of that sector.
- Intellectual property issues are more significant when exporting. And being unaware of regulations abroad, enterprises find themselves in a vulnerable position with their own product vis-à-vis the competitor's product.
- **Exporting should not be an end in itself, but it should always be linked to the improvement and expansion of the quality of local products. In the domestic/local market, Armenian enterprises are not competitive neither in terms of price, nor quality, especially compared to internationally recognized brands.**
- **The promotion of domestic products should not be an end in itself either. And in some cases, it is beneficial to import (e.g. importing raw materials) while the production industry of own raw materials is in the developing and expanding in the local economy.**
- Since information about external markets is less accessible to entrepreneurs, the Government or the Chamber of Commerce and Industry can use the governmental funds to cover the expenses of foreign market analyses (brands, sales volumes, import volumes, import geography, etc.) for a particular sector and provide data **free of charge** to the enterprises in Armenia. This is especially important for start-up businesses in Armenia that have much fewer resources to compete in the market.

### 5.7.1. Legislation and Administration

- The tax legislation and the tax system do not contribute to the development of industry. The tax legislation and accounting should help companies calculate their business costs and optimize production. In Armenia the taxing culture and governmental practices create an environment when taxing and accounting are used by businesses to defend themselves (against the governmental practices) rather than optimize their production.

- **The establishment of industry development fund** can be relevant to help coordinate investments, and promoted targeted development in various sectors of the economy.

- There were numerous recommendations for the improvement of Armenia's **Law on Procurements** (adopted on 16.12.2016). Particularly, the entrepreneurs highlighted the following points:

- **Technical tasks are often not fully elaborated or defined in tenders in public procurement procedures** and this creates misunderstandings of qualification criteria, resulting in companies submitting proposals being "disqualified." Amendments on proposals are not allowed either. Consequently, the entrepreneurs see tendering competitions as only symbolic because, as they claim, often the winning enterprises do not represent the particular industry.

Hence, the suggestion is to set up a consultation process during the tenders so that any misunderstanding arising from the definition of the tender criteria or different requirements will not result in the exclusion of businesses from the tender competition. This will enable a higher quality of competition for the tender, and a truly deserving business company from the industry can win the tender.

-There is a strong need for changes **in the Law on Procurements**. In particular, the entrepreneurs note that **the proposed purchasing price should be consistent with the anticipated quality**, i.e. it is impossible to provide quality products at a very cheap price. In particular, quality in the food industry is a relative concept, so different standards should be defined in the procurement process.

**The entrepreneurs proposed** to implement a scoring system and distribute the scores according to the price, the experience of the enterprise, the recommendations and work guarantees of that enterprise by another peer company in the same industry, the experience of successful cooperation with other entities in the private sector, the existence of the corporate responsibility policy of the organization and based on a criteria that the particular product suggests innovative solutions.

-- **Another problem with the public procurement procedure is that it does not stimulate innovation. As a result of that the venture system is also underdeveloped.** Since some of the public procurements related to infrastructure (bridges, tunnels, reservoirs, roads, schools, kindergartens, hospitals, etc.) intend to serve both the present and the future generations, they ought to be capable of providing for future generations in the long run and possess innovative thought, design, and taste.

**It is proposed** to establish such a legal framework and judicial system that the investor can be sure that the investment meets the above mentioned and that investment will be justified in terms of multiplicative virtues of the product to serve future generations.

-- **Wholesale and retail purchases are not differentiated in Armenia's Law on Procurements in the food industry. There is a strong need to create logistics centers, and the taxing of which should be modified.** For example, at present if a local tomato grower produces and delivers the tomatoes to a restaurateur or consumer, it is not taxed. But when a third party decides to help the farmer and deal with the sale of his products, s/he has to pay value-added tax (VAT).

**Thus, to promote** the development of the sector, procurement logistics centers should be created, which will deal with the sale of the farmer's products and will be exempt from VAT.

A **taxing scale** for the use of wholesale and retail trade and logistics centers should also be defined.

--In the case of public procurement, the contract with the winner of the public procurement tender is often signed with a delay, and until then the winning company has to maintain its staff for the particular period, pay salaries and office expenses. As a result, the profit in the framework of public procurement is very small for the company.

**Thus, as a proposal**, the public procurement process should be rhythmic and the signed contracts with the particular enterprise should be long-term for several years since the public procurement can establish a long-term cooperation with the company. Public procurements require a bank guarantee, for which companies must freeze significant funds and pledge property. To ensure the rhythmic work of the enterprise participating in public procurement, the other option is to sign contracts with various private entities in parallel. But even then, the problem of human resources arises, since current human resources of the company are typically smaller and will not be sufficient for the public procurement contract (i.e. the issue is much more complex).

- To attract high-quality specialists from different fields from abroad, the current regulations are not attractive either in terms of taxation or legislation. In the government program, within the framework of which it is planned to attract several hundred high-quality specialists with state subsidization of a significant part of the salary, extremely strict standards are defined. The entrepreneurs state that these standards and the low amount of the provided salary are not relevant and realistic to invite high-quality specialists. Higher remuneration is especially required for professionals with education and advanced experience abroad to ensure the anticipated level of expertise of the invited professional.

**It is proposed** to exempt those specialists invited from abroad from tax since their extensive knowledge creates more added value than the tax paid to the state.

- Excessive administration is a major barrier to the importing and exporting process, slowing exporting/importing to the point where it is no longer advantageous for the businessman. The problem is even more exacerbated for products with dual application in various areas. The paperwork requires longer time and larger financial resources, which enterprises often cannot afford.

**It is proposed** that the state should facilitate the administration of importing/exporting and bear part of the costs to promote the development of the industrial sector. Here the Russian experience in pharmaceuticals is given as an example, when since 2012, 50% of all expenses related to the export of drugs (with the exception of salaries) have been covered by the Russian Government.

### 5.7.2. Education and Specialists

- According to the results of the research study, **to ensure competitiveness in almost all sectors of the economy, it is crucial to have highly qualified specialists.**

The entrepreneurs note, that professional training organizations are uncompetitive. The old, traditional education model with long courses no longer works. A dynamic model is needed, with a fast-paced and flexible training approach that can adapt to the demands of the workforce in the market.

Every industrial sector can create its training center which would provide professional requirements for the enterprises of that particular sector.

No higher education institution in Armenia would **train personnel in the field of product registration and certification.** This causes great difficulties, especially for start-ups.

- The knowledge transfer and application processes in higher education institutions (HEI) must be aligned. It will provide an opportunity to produce specialists in line with the economic demand and state development key priorities. To achieve this, **it is extremely important to create conditions for close cooperation with employers and develop strategies for the implementation of applied results in the educational process, particularly to promote secondary vocational education training.**

In the field of secondary vocational education, secondary vocational institutions must cooperate more actively with employers to produce specialists with qualifications meeting the requirements of the current labor market. However, many employers are reluctant to cooperate. It turns out that, on the one hand, there is a severe shortage of personnel in almost all sectors, and on the other hand, employers are not open to cooperating with educational institutions to train qualified specialists in line with the requirements of the labor market.

**The entrepreneurus proposed that the Government develop a policy and a clear approach to strengthen 'education-production' and 'education-labour market' cooperation**, as well as to encourage employers to cooperate more closely and willingly with educational institutions.

-The Government should also support those professions that can guarantee the balanced growth of different sectors of the economy, particularly those that are currently in high demand in the job market.

-It is necessary to **establish a system that ensures the close relationship and sustainable development of education and the advanced technologies' sector**, which will create an opportunity to carry out **teaching and sustainable training of personnel aimed at the application of nano-technologies and the latest technological developments.**

-In accordance with Armenia's development priorities, it is essential to offer the chance to receive basic and applied long-term education.

For this purpose, the Government **can sponsor or create a fund that will provide financial support for the training and professional advancement of young personnel abroad**. The requirement that these individuals return to Armenia after completing their training abroad and work in Armenia for a specific amount of time (for example, three to five years) may be a condition of sponsorship or financial support, or otherwise the state funding should be compensated or reimbursed. For instance, in Jordan, the family of the student pledges some ownership to the Government, such as a house the family owns, as a guarantee that after studying abroad the student will return home and work for the required period.

### **5.7.3. Financial System**

- The Government should expand/promote the provision of low-interest loans and guarantees by the Central Bank to any qualifying citizen eligible for receiving bank credit, and not just focus on supporting enterprises in certain industries.

The current support model of the Government of Armenia includes the assistance of individual sectors, such as agriculture, IT sectors, production in border zones, renewable energy, and tourism. The banking policies should encourage business startups among prospective business startups as well.

- As a result of geopolitical developments due to the war in Ukraine, the Government has given banks unlimited powers to independently regulate issues related to international transfers. This has created an unfavorable business environment, with banks imposing a commission of 3% fee for international transfers. The commission of 3% is a huge waste of financial resources for entrepreneurs and causes dissatisfaction among investors.



- Non-cash payments are allowed in Yerevan, but not in marzes. This creates unequal conditions for entrepreneurs in marzes.
- There is a severe lack of specialists in accounting services since currently there is a large flow of accountants from other sector to the IT sector.

#### **5.7.4. Business Cooperation, Employers' Unions, Associations**

- **Entrepreneurship development in different industries will be promoted when businesses support one another.** Enterprises can support one another through various unions and business associations that can protect the business interests of the same sector.

The successful joint partnership will also help the industry take a systematic approach to its problems and raise its needs and issues in a coordinated manner.

- With accounting and legal outsourcing, the service sector helps all industries to develop, entrepreneurs receive proper tax advice and are protected in terms of inspections, which allows entrepreneurs to focus mainly on the development of their activities.

- Entrepreneurs suggested that the Republican Union of Employers of Armenia (RUEA), jointly with industry specialists, develop and define quality standards for companies providing services, according to which it will be possible to select companies with high-quality services in a particular sector. In other words, using its high profile and public reputation, the RUEA can assume the role of an organization that develops guarantees for quality and fills the lack of a similar unified system.

## 6. KEY CONCLUSIONS AND RECOMMENDATIONS

1. The establishment of small enterprises in any sector of the economy is possible and justified if the needs of the society are not sufficiently met in the given sector. Thus, at the meso-level, the SME demonstrates its regulatory role.
2. For SMEs in Armenia, the following issues are obvious:
  - shortcomings of the current legal framework,
  - a focus on commercial activities rather than on production activities,
  - insufficient level of small business development and ineffective mechanisms of the credit system,
  - lack of policies to address market failures.
3. Ensuring the sustainable development of entrepreneurial activity (sustainable entrepreneurship), which will logically result in sustainable employment, is regarded as an urgent issue of state support.
4. There is no single universal solution for all SME problems: in some cases, the key to success is the implementation of decentralized SME development policies, and in some cases, the use of centralized approaches.
5. Each SME entity requires the use of various tools through the state policies implemented in a particular sector to overcome their inherent obstacles.
6. As a result of the lack of support, within the framework of state regulations, some SMEs prosper, and some, on the contrary, suffer difficulties, but one thing is definitely clear: following state regulations is aimed at ensuring a healthy, safe, equal and competitive business environment, which is undertaken by the Government of Armenia.
7. The SME strategy of Armenia aims to create a favorable environment for the formation and growth of innovative and competitive SMEs.
8. As a result of the low efficiency of the bankruptcy process in Armenia and the time-consuming nature of tax audits, financial and other assets are directed to the repayment of debts, and not to the recovery of the organization.
9. The research experience of the Republican Union of Employers of Armenia (RUEA) comes to prove that the problem of access to finance among SMEs is essentially linked to the unstable entrepreneurial status of companies in Armenia.
10. External and internal negative factors quickly affect SMEs, while large companies manage to maintain their stable state.
11. We propose to promote cooperation between large and small and medium-sized enterprises at the state level, to direct a significant part of the support tools for small and medium-sized enterprises to large companies, thus promoting the small and medium-sized enterprises to cooperate with the latter. In other words, we suggest improving the entrepreneurial culture among SMEs by engaging them with bigger companies, in which case, for example, the big companies will significantly change the economic culture through the classification system of partner SMEs, and with their long-term partnership, the bigger companies will provide the SMEs with sustainable entrepreneurship.
12. Consequently, it is important at the state level to promote the establishment of large companies in Armenia through various investment programs and the transfer of businesses from abroad. The available statistics show that each large company can consolidate around and provide sustainable entrepreneurship through outsourcing on average to 2500-3000 SMEs. There are

slightly over 10 large companies in Armenia, and increasing that number by another 10 (having at least 20 such large companies) will ensure the sustainable entrepreneurship of a total of about 50,000 micro and SMEs. This approach that we suggest is an alternative option for ensuring micro and SME sustainable entrepreneurship, thanks to which SMEs will gain new opportunities and indicators in terms of obtaining loans or providing access to finance.

13. Affordable and quality consulting services can significantly reduce the transaction costs of attracting loans for SMEs, increase the level of management, and promote the use of innovation, thereby increasing the competitiveness of companies.
14. It is necessary to promote the use of ISO quality management systems, which will significantly improve management and productivity among SMEs, making SMEs more predictable, as a result of which it will be easier to use consulting services and improve the overall indicators obtained. It is no secret that many issues of SMEs are caused by poor entrepreneurial culture and poor management performance.
15. The experience of RUEA on SME issues shows that the public procurement system does not really stimulate innovation among SMEs. Announcing tenders with rigid criteria for public procurement deprives SMEs of the opportunity to offer independent and innovative solutions.
16. It is crucial to develop a consultation process during tenders, so that misunderstandings caused by incomplete or unclear definition of tender criteria or various requirements do not affect the exclusion of enterprises from the tender competition, and the competition during tenders does not decrease the chances of the particular industry's core enterprises to participate in the tendered.
17. It becomes crucial for SMEs to have employees with different abilities and skills.
18. From the point of view of entering the markets and gaining the necessary confidence in the field of export, the RUEA emphasizes state support in international certification processes, especially in the following directions: GlobalGap, CE, ISO, HALAL, etc.
19. In this case, the creation of product storage bases, the establishment or lease of logistics centers, as well as the establishment of storage facilities in countries that are regarded as important intersections and partner countries, especially in the important centers of the Armenian diaspora, can play a significant role for the Republic of Armenia.
20. As to RUEA, the visibility of SMEs can also be increased through business fairs and business forums held in Armenia, such as by organizing an international fair in Armenia named "Armenia Export Potential."
21. We believe that carrying out a focused research study in the area of consulting services could help promote the advisory services that are still lacking.
22. Increasing the role of organizations based on business membership is strongly recommended.
23. The market itself is not able to identify in time the industries that can be relied upon in the future and quickly focus the necessary resources for the accelerated development of these industries. In other words, the market is not capable of carrying out an accelerated structural restructuring of the economy. It is the state responsibility. The structure of the economy is rather regulated by the state than the market.
24. State intervention in economic development is important, but is justified only in cases when during a particular simultaneous development situation the state intervention has specific objective of transforming the structure of the economy. As a result, the sectoral approach to economic development is not an end in itself and is implemented to regulate or change the structure of the economy. The sectoral approach is effective when the specific industrial branch has not yet fallen into the dynamic rhythm of development. Once a branch of an industry begins to develop dynamically, the state is no longer able to control the tendency of development.

25. The role of the state in changing the structure of the economy is most effective when a particular industry is still underdeveloped or not developed.
26. Therefore, it is essential to develop not only technologically saturated or advanced industries, but also traditional industries where the labour force is already engaged. For these traditional sectors of the economy, the Armenian Government still does not have an institutional development model. So one must be developed.
27. Entering into non-ethnic markets abroad is complicated. When entering a large commercial network, companies must have well-planned large-scale production without interruption. In addition to uninterrupted production, companies also need to supply large volumes without interruption. This is very difficult for Armenia, taking into account the logistical complications of the region and a number of other investment-related problems. Armenian companies producing similar products must pool their resources to pay these expenses and agree to present their products under one brand, named "Made in Armenia".
28. Packaging creates an added value to the product. Both for food production and exporting, the focus should also be on the packaging, so that the product is sold at a higher price inside the country and abroad.
29. For the enterprises of a particular sector, a technical park specific to that sector can be established which will have equipment and vehicles to meet the export requirements of that industry.
30. Although the equipment engineering industry in Armenia currently has a small market, this sector is related to all sectors as it can benefit all sectors. But the small demand market in Armenia has resulted in poor development of this industry.
31. The development of high-tech industries requires a simultaneous rhythm of supply so that sub-sectors can supply each other with products as raw materials or components. Advanced and strong supply logistics are needed.
32. Aiming to promote the development of the food industry, procurement logistics centers should be established that will deal with the sale of the farmers' products and will be exempt from VAT.
33. There are no higher education institutions in Armenia that can train and prepare specialists in the field of product registration and certification. This causes great difficulties, especially for start-ups.
34. Supporting one another among businesses will also encourage the growth of entrepreneurship across a variety of sectors.
35. Perhaps, one of the most significant findings of this study is that all the industrial sectors examined during the research have similar issues and development barriers. All this testifies to the systemic problems of the economy of Armenia, which are so large-scale and have gone unsolved for decades, that the enterprises are mired in these systemic issues, instead of competing on narrow problems unique to their industry.

## 7. CONCLUSION

This research study examined the current development issues in several sectors of the economy in Armenia: machinery/equipment engineering, pharmaceuticals, metallurgy (including metalworking) and chemical industry, gold-smithing and diamond-smithing industry, and light industry (textile, leather, food industry).

The purpose of the study was to jointly formulate the development prospects of these industries with the sector entrepreneurs and to support the Government of Armenia in developing its state support toolkit for these sectors; to improve the effectiveness of any current or newly designed economic sector development strategies and support toolkits making them more targeted and productive.

Perhaps the most important conclusion of this study is that there are problems in the economy of Armenia that have not been solved for many years: incomplete legislation, and policies aimed at persecuting and fining the enterprise, rather than helping the enterprise to organize and control the efficiency of business activities. Almost unnoticeable impact of functioning of state advisory bodies or lack of such bodies, cumbersome import and export administrative and customs processing, an underdeveloped state education system that is out of touch with business needs, etc. still prevail. And by their nature, these systematic issues are so dominant that they hold back business, keeping industry-specific development problems.

This comes to prove that only by effectively solving these systemic problems, the Government will be able to advance the development of all sectors of the economy.

However, solving systemic problems is a technical part of development. In terms of content, the state should have a concept of the development of the economy and specific priorities of industrial development, i.e., which branch/branches can unite and link several sectors of the economy and push other sectors in cooperation. It entails having branches of the industrial championship and framing the development approach around them in such a way that it necessarily engages with other related branches. In other words, **the strategies should be developed not for a particular industry but with the tendency to expand the network of cooperation with a particular sector and other branches of industry.**

In Armenia, such key industries are food security (RUEA and WFP 2020a, 2020b), high technology and engineering, chemistry, and pharmaceuticals. Since these industries include almost all branches of industry in their value chain, the development of these industries as sectors of systemic importance will consolidate other sectors of the economy and help them develop. Therefore, the strategies should have a cooperative and systemic linking approach both in the field of economy and education and in the fields of external policy and international diplomacy (economic diplomacy).

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