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# ACADEMIA GOVERNMENT INVESTMENT PARTNERSHIP CONFERENCE REPORT

Enterprise Development and Investment Promotions Project (EDIP)

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Palestine Polytechnic University

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## **1. Tri-Cooperation; Academic, Private and Public sectors**

**By: Dr. Samir Hazboun**

### **Background**

Since the establishment of the Palestinian Authority in 1994, private and public sectors started negotiations to create a bi-cooperation between each other, these negotiations were interrupted by the unstable political and economical impediments and restrictions in the Palestinian area for internal or external reasons. The Palestinian academic institutions didn't have any representation in any cooperation negotiations, but were working independently to serve the community and the needs of the market. There were local and international initiatives to reactivate the Bi-cooperation negotiations and form a mechanism that creates a genuine and sustainable cooperation among them, which made the first and second conferences in 2007 and 2008, but none of them had concrete results, until a third conference took place in which the two parties agreed on a real mechanism. The public and private sectors created two committees to negotiate and follow up with the needs and requirements of both sides, but as a result of many internal and external obstacles, no actual achievements were accomplished, and also there was no serious efforts to create a Tri-lateral body, that consider the academic sector in the cooperation.

### **Summary of SWOT analysis for the Bi-Cooperation:**

#### **Strengths:**

The serious commitment of the PNA to establish a Bi-cooperation gives a push for the negotiations to go ahead. In addition, the commitments of the decision makers in the two sectors for cooperation, made the current government to list the development of a concrete cooperation as priority in its strategy, and consider taking the common forum agenda by a ministerial decision. This urged the private sector to form a technical unit to mobilize its needs and agenda for the public sector.

#### **Weaknesses:**

The type of relationship between the two committees didn't develop to be officially organized into an institution, that's in addition to the delays in setting the first meeting between them for many reasons; the executive authority personnel don't believe enough in cooperation, and there is no follow-up mechanism for the previous achievements and decisions. The same elements also prevailed within the committee of the private sector. This eventually led to weak the coordination between the public and private sector committees.

#### **Opportunities:**

Both the government and donors are interested in achieving the Bi-cooperation, and to involve the Academic sector into the cooperation.

**Threats:**

The real threat is the Palestinian political agenda which might change with the next government. The next government might not want to take the Bi-cooperation into consideration, either because it won't be able to satisfy the needs of the private sector or because the private sector won't remain seriously committed into this cooperation. Moreover, there are no tangible achievements until now in this issue.

**Palestinian experience in Bi/Tri-cooperation:**

The Palestinian educational institutions record the longest and best bi-cooperation experience because of its role within the society and direct contact with its needs. Universities were the first institutions to create the bi-cooperation by establishing the continuous educational institutions, which aim to respond to the social needs that arise, either nationally or internationally.

The Palestinian educational institutions formed successful co-operations with local private, public or international institutions, with the purpose to serve the local community.

Bethlehem and Hebron had a unique experience in Tri-Cooperation; they have formed a Local Development Committees that gathers the three sectors, and it aims to enhance cooperation and form a strategic plan for their areas. Both committees have achieved some progressive co-operational projects, among them the “Stone Center” that was established in Hebron. This center was the fruit of combined efforts between the Polytechnic University and the public sector, with the Stone and Marble Union, to enhance the industry and develop it.

**International experience in Tri-Cooperation:**

It's so important to study the international experiences in this field and benefit from it. However, it is essential to study the experience that is close to our context because each country has its own resources and unique situation. Thus, we decided to study the Japanese experience. The Japanese industry does not depend on natural resources or reservations, but on technologies that are produced locally, based on the Tri-cooperation that was founded over there.

**The Japanese experience:**

Japan's Tri-cooperation started before the First World War, by the government initiative to form a national Tri-cooperation. Since the Japanese imperial universities were very powerful to enhance the private sector's abilities; the first step they made was to set a definition for the cooperation and mechanism to achieve it.

Despite obstacles, the Japanese private sector was open to respond to such initiatives and form the cooperation.

The cooperation formed a variety of joint mechanisms to enhance scientific researches and achievements, such as joint researches, giving scholarships and advice, set rules and regulations to encourage forming new companies based on modern technologies created in the universities, and many other methods.

The Japanese success factors can be summarized in the following:

- The support and leadership of the government to form the cooperation.
- The need and desire of the private sector to cooperate with the educational institutions.
- The influence of the Japanese universities to perform professional studies and researches especially in high technology.
- Key motivators who are focused to enhance the cooperation and its mechanism.

### **Conclusions and recommendations:**

We can split the recommendations into four categories:

General Recommendations:

All parties have to agree on a definition for the cooperation so that mechanism can be founded through a coordination body that has to be created to support the cooperation. Moreover, an annual prize can be designed for the best achieved project in the tri-cooperation organization.

Recommendations for the Private sector:

To establish a follow up committee for its needs from the public sector, develop their relationship into a complimentary plan , organize their activities and goals internally, and to follow up with the government, also to finance R&D activities in the Palestinian economy.

Recommendations for the Public sector:

- Organizing the researches that are being conducted in the tri-cooperation is very essential for the success of the cooperation.
- Dedicating part of the budget to support the joint projects between the parties.
- Supporting the Palestinian educational institutions to enrich the Educational System.
- Urging Palestinian representative offices abroad to take a major role in encouraging foreign companies and universities to cooperate with local institutions and educational organizations in Palestine, to create a better scientific and research atmosphere.

Recommendations for the Educational sector:

- Focus on advanced level of education in planning educational programs.
- Encourage exchange of experience and know-how with foreign counterparts.
- Support the national Palestinian companies that are engaged into the high-tech industry by offering their employees special scholarships.
- Offer scholarships to students to study abroad and transfer technologies and ideas to the Palestinian industries and educational system.

- Enhance the research abilities of the students by giving them a related and advanced research courses.
- Help the pre-graduate students to gain experience by working in field for a whole semester.
- Create new special task for the vice president of education in each university that aims to transfer technologies into the Palestinian educational system.

## **2. The Impact of Creativity and Innovation on Creating a Competitive Advantage to the Palestinian Stone and Marble Sector**

By:

Dr. Suhail Sultan

Mr. Mohammad Sharia

### **Executive Summary**

The stone and marble industry in Palestine is underlying under the modest economic stage called “natural talents”; categorized by the availability of raw material, semi-skilled labor force, un-encouraging environment and poor managerial, technical and marketing abilities for the working firms, it is also categorized by the severe competition between the rivalry firms mainly in pricing. The similarities between these firms are high in terms of production lines, products and services.

This research aims at providing tools and mechanisms to improve the status of stone and marble industry, by shifting from the “natural talent” state to the “innovation and creativity” states; which implies providing a healthy working environment, change in production techniques, management and marketing methodologies, the level of availability of the required infrastructure, infusion of information and communication technologies, the cooperation of the supportive institutions and the emergence of new ways of thinking and decision making, as well as the creation of new challenging organizational culture and inducing the differentiation and creative strategies.

This research evolves from the importance of transforming the Palestinian industries from being totally dependent over the Israeli economy to be transformed into the gradual de-annexing stage, by constructing the independence stage and achieving a competitive advantage to the Palestinian industries leading to the thrive of the economic process; sustaining prosperity and welfare to the people.

A lot of cooperative efforts are still needed to be exerted, in order to ensure the shifting toward the “innovation and creativity” state in the stone and marble industry, imperatively between the private sectors, represented in governmental institutions and the academic institutions. Such partnership – once established - shall induce a greater impact on the competitive advantage of the industry and the competitive advantage of the companies.

The research will focus on the main impediments obstructing the achievement of the competitive advantage as a (prevailing sustainable phenomenon); by introducing Porter’s models of competitive advantage, and assessing these models with regard to the Palestinian industry.

The paper consists four chapters: introduction, theoretical frame work, analysis and findings and conclusions in addition to the annexes and references. After the reviewing of the available literature; the study tool consisted of a questionnaire distributed amongst a sample of 60 factories covering north, middle and south regions of the West Bank, personal interviews were also conducted to this representative of 10% sample of from the industrial community in the West Bank.

The research was based on the following question as a basic assumption, that is; what tools are needed to build a national competitive advantage for stone and marble industry? To prove this the following sub questions have to be answered:

- What is the general environment of the industry; production conditions, demand conditions, support industries and institutions, and the five generic forces?
- What is the working strategy at the firm's side; cost leadership, differentiation, or focus strategy.
- What is the balance scorecard (the competitive advantage) of the firms look like?
- What is the application of information and communication technologies on the sector; usage of computers, usage of internet applications, the impact on the firm's performance.
- What is the demographic information of these firms?

According to the recited literature, it was obvious that there were two different views regarding the Palestinian competitive advantage. The first implies that the availability of the attractive color raw material represents the competitive advantage. The second view indicates that competitive advantage can be achieved via proper interaction of accumulated experience and knowledge with competent human resources. They mentioned Japan as a good example of this view.

SWOT analysis tool was used to point out the strengths and weaknesses of the industry, as well as the available opportunities and threats. The following factors were envisaged as possible factors that encourage or impede the achievement of the competitive advantage:

- Evaluation of production factors
- Demand on products
- Financial growth
- Accumulation of expertise and knowledge
- The products market share
- Usage of internet and ICT
- Internal organization of firms
- Human resources
- Support environment

Important recommendations:

- 1 Simplifying the rules and regulations related to the industry, taking into account that the vast majority of the industry is categorized as family owned and managed small and medium size businesses.
- 2 Providing and developing the infrastructure facilities and utilities at reasonable prices and adequate quantities and qualities. This might include; electricity, water, recycling, geographic mapping, standards and roads.

- 3 Building up the human capacities through training, maintenance and laboratory testing.
- 4 Developing lending institutions and making easy access to finance.
- 5 Encourage the diffusion of ICT into the different business functions of the industry, i.e. production, marketing, selling, management, inventory, book keeping, etc.
- 6 Encouraging the strategic cooperation and clustering in the industry.

Clustering will help building the competitive advantage through the following measures:

- Promoting innovation and creativity
- Improving the image of the Palestinian industry
- Increasing exports
- Improving the infrastructure and decreasing costs
- Information seeking and provision
- Enhancing the work environment

Despite the presence of some programs, endeavoring to help this industry during the past 12 years; the absence of comprehensive a national strategy to improve the performance of this industry was prevailing. It is highly recommended to build a national team to develop this industry through crafting a national business strategy for the sector, guiding its vision and developmental strategies for the coming decade. This team could be comprised of; Ministry of National Economy, Union of Stone and Marble, Palestine Trade Center (Pal-trade), Palestinian Federation of Industries, Academic Institutions, Ministry of Finance, Ministry of Local Government, Ministry of Planning and some experts.

### 3. Palestinian Industrial Policies: Short and long run Options

By Dr. Basim Makhoul

#### Executive Summary

The purpose of this paper is to firstly, assess the Palestinian industrial policies implemented to this stage, and secondly to propose relevant industrial policies both in the short and long runs, after reviewing the main obstacles facing the Palestinian industries focusing mainly on the weak backward and forward linkages, heavy reliance on the Israeli controlled imported raw materials and technology, weak supportive institutions, lack of export capabilities and incentives, complicated export procedures, the Israel restrictive measures, lack of proper infrastructure and utilities and the lack of national vision and strategy towards the industrial sector; All these obstacles negatively affected the competitiveness of the Palestinian industrial sector.

Huge efforts along with many policies and measures were implemented by the Palestinian National Authority, supportive institutions, donor community and the private sector seeking to upgrade the competitiveness of the industrial sector. Measures included but were not limited to: a generous investment promotion law, continuous dialogue with the private sector, favorable public tenders, facilitating the establishment and promotion of supportive institutions, large investment in infrastructure and utilities, improving legal and judicial systems and rule of law...etc. These measures, though highly recognized and appreciated, were not sufficient to overcome the obstacles facing industrial firms, thus improve their competitiveness. Still, ore measures and efforts are required.

Industrial policies vary according to its tools, time horizon, scope and target. Experience showed that most countries started by import substitution measures focusing on producing consumer non-durable commodities. Efforts were directed to expand demand on domestically produced commodities. At the same time, measures were taken to upgrade the export potentials of promising sectors, the implementation of such strategy demands promoting access to finance, fiscal incentives, restrictive import policy, and standard to promote domestic production toward industrial policies. Many of these **short run industrial policy measures** were implemented in the Palestinian Territory. **Fiscal measures** included tax holidays, simplified tax procedures, subsidized utilities, favorable public tenders, and expansion of infrastructure services, including industrial zones. **Access to finance** can be boosted by the establishment and activation of credit guarantees schemes, drafting and ratifying supportive and needed legislation, encouraging competition among financial institution. **Trade policies** should consider raising customs on imports that can be domestically produced , utilize non-tariff trade barriers such as standards specially against cheap, low quality imports from East Asian countries, activating the trade concession given to Palestinian products by many countries including USA, EC and Arab Countries. **Supportive institutions** expanded and upgraded their business development services especially in the areas of promotion, capacity building, international networking and advocacy. General policies are needed to alleviate the

impact of Israel restrictive measures; mainly movement restriction, licensing at operation restriction in areas designated B and C, limited access to domestic markets in Gaza, East Jerusalem, and Jordan Valley (Al-Aghwar).

In the **long turn**, the needed industrial policies are different and require certain level of Palestinian control on their borders and land as well as the ability to utilize a wide spectrum of economic tools and measures which are considered crucial to overcome the key Palestinian economic limitation, manifested in the small size of the Palestinian market, in terms of its limited purchasing power, and number of consumers. Thus, Palestinian industries have only one option to expand into international markets, and compete based on quality “product differentiation” rather than on cost competitiveness. Evidence shows that Palestinian industries have a limited chance to compete on prices given the high production cost verses commodities produced in East Asian countries and neighboring Arab countries. Therefore, Palestinian manufacturers should focus on producing high quality –high value commodities. Nevertheless, such strategy is not easy to apply but it is not farfetched from being implemented, whereas industrial policies can contribute to this end. The suggested model should initiate by focusing on promising sectors that have a good opportunity to compete and survive globally, such sectors were thoroughly analyzed and pointed out by many previous studies, indicating that these potential sectors include stone and marble, meat processing, ICT, and agribusiness mainly in Jericho and Jordan valley. Other sectors include furniture, pharmaceuticals.

Long run industrial policies should focus on these sectors in order to upgrade their absolute and relative competitive advantages. The needed industrial policies can be categorized based on the framework developed by Michael Porter’s Diamond Model. Such model subdivides industrial policies into four categories:

1. Market Demand conditions,
2. Input markets conditions,
3. Supportive institution,
4. Rivalry among existing firms.

Each of the above categories contains many measures that can work on boosting the competitiveness of industrial activities. But, it is recommended to focus on certain leading sectors rather than trying to boost all industrial sectors.

The paper concludes by focusing on the industrial policies needed to upgrade the **stone and marble sector** being a widely recognized leading sector with huge export potentials. The sector was not specifically targeted by any industrial policy. Immediate measures are needed to provide an affordable and qualitative utilities and infrastructure services; a specialized industrial zone could be of great help to the sector. Other measures need to focus on promotion and marketing, ensured participation and proper presentation in trade fairs, measures to alleviate Israel restriction mainly those related to export procedures, area C restriction. In addition to human skills upgrading.

## **4. Framing of Engineering Programs**

### **Towards the Needs of Palestinian Industry**

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This study deals with the level of consistency and compatibility between the Engineering Educational Curricula and Industry in Palestine, thus addressing engineering educational curricula from a localized applicable approach; Focusing on engineering undergraduate programs in the directly related fields toward industry. Also contributing to the industrial sector via generating uplifted groups of engineering staff, the study serves the Academic sector by the evaluation of the current curricula by conceptualization of means of development.

The study also tackles the needs of the Accreditation and Quality Assurance Commission (AQAC) as a part of the governmental sector by setting a referral study to the engineering educational curricula. However, neither this study nor other studies are capable of providing grassroots solution, unless the well of change and dire focus on the triangle of awareness, contentment and trust are the prevailing doctrine amongst concerned stakeholders.

While evaluating the level of coordination between academic and industrial sectors, this research work assesses the needs and explores the development prospective. It is based on a field survey among the stakeholders from industrial sector including business owners and engineers, and from academic sector including the academicians and students. It utilizes research tools of questionnaire and interview.

After presenting the current overall pictures of engineering programs and local industry, the study reviews previous related studies at both local and regional levels, which highlighted the gap between engineering educational curricula and industry, an issue that is emphasized in this study through its survey. Other related important issues are highlighted in this study, such as inadequate clarification from local industry of their needs, and insufficient knowledge about the existence of engineering programs and exact fields. Parallel to that, universities do not play active and efficient roles in providing such knowledge to industry. This results in obstacles against the process of customizing engineering programs.

The Academics are still not sufficiently active towards cooperation with industry in research and consultation activities, while the industry is still hesitant about the feasibility of hiring engineers and about its conflict with confidentiality. This requires focusing attention on ethics and on improving the level of salaries of engineers.

A diagnostic analysis of the current situation of engineering education and an overall strategic SWOT analysis is presented. Various strengths are highlighted in engineering programs, motivation to change, and education environment, while

weaknesses include program structural issues and the lack of sufficient follow up, control and combativeness, and bridging difficulties. Opportunities include the possibility of utilizing the support from various parties, the industry itself and its capability for development. Recognized threats include weak and slow interaction from industry, Palestinian situation and engineering employment.

A vision for the future of potential industries is foreseen as an input to the development of engineering programs. Potential development opportunities were foreseen despite the political situation and occupation, and isolation of the West Bank from its national domain, as major obstacles. Various success stories are presented such as the establishment of stone and marble center which developed and implemented a unique diploma in the field that serves stone industry through academic, industrial and governmental cooperation.

The prospective of industry and academia for developing existing and new programs are explored. It is essential to extend traditional prospective of engineering education towards multidimensional modern engineering education. Results indicate that the designs of the current programs need to be improved in aspects related to skills and capabilities, through reviewing curricula and educational methods.

Recommendations are presented for the development of food production engineering and improvement of production related programs, through the introduction of courses dealing with industrial processes for important local industries such as metal, food, plastic, leather and pharmaceutical industries, in addition to the reinforcement of non-technical capabilities and skills.

The survey highlighted important skills and capabilities, including technical scientific knowledge, operational and manual capabilities, and communications skills, as well as career codes and responsibilities. In addition to that, other skills related to quality assurance, management, language, were highlighted by the industry. While paying attention to the capability of dealing with production flow-sheets, the academicians highlighted mentality of scientific research and problem analysis approach, capabilities of dealing with modern engineering technologies and tools, capabilities of planning and performing experimental work, capabilities to deal with multidisciplinary teams. These are in agreement with international standards (i.e. ABET2000). Academicians and industrialists do not support requirements stressed in ABET2000, related to awareness about modern causes and issues, and capability for life-time learning.

The study proposes offering new engineering programs like B.Sc. in production engineering, and suggests jumping to innovative engineering programs that do not exist worldwide. Small project engineering is an example, which can provide self-employment opportunities; an essential option in the current circumstances; under occupation and the lack of resources. It also proposes a program in technology

engineering that can be designed to enable engineers to play general engineering roles in various local industries.

Educational methods and the reinforcing applied aspects in engineering programs are also handled in the study. It is proposed to change the educational perspective from professor-centralized methods to student-centralized learning in an active information environment and critical thinking atmosphere. Improvement of skills requires increasing non-traditional activities in the programs and courses, for example, brainstorming sessions among students would improve communication skills, and self reading chapters which would reinforce self learning capabilities and responsibilities.

Due to the absence of studies dealing with industrial demand for engineers, this study provides estimates based on available statistics of industrial institutions and labor size, together with assumptions (verified in the light of the field study). It concludes that there is a reasonable and short term agreement between demand and available engineer. It is important to educate engineering students about economic issues and industrial sectors in Palestine, so that they become aware of the situation in which they would integrate with, and they would have better sensing of opportunities and better understanding of the circumstances.