

## Assessing Innovation in Palestinian Industries (Stone & Marble and Food & Beverage sectors)

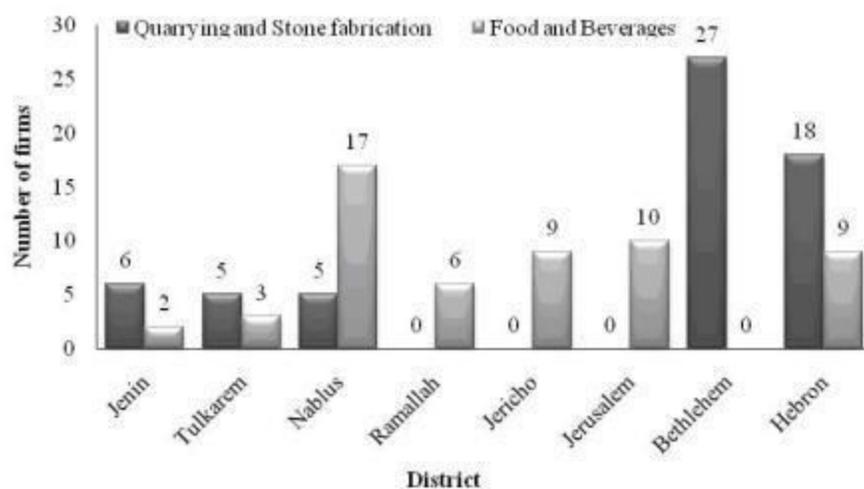
### Case Study in Stone and Marble and Food and Beverage sectors

The STIO released a special bulletin on innovation in the industries of, stone, marble, food and beverage. This study was performed by conducting, implementing and analyzing [the community innovation survey \(CIS\) \(Arabic version\)](#) on two major Palestinian industrial sectors; namely the quarrying and stone fabrication, and the food and beverages covering the observation period 2006-2008. This survey collects information about product and process innovation as well as organisational and marketing innovation during the three-year period.

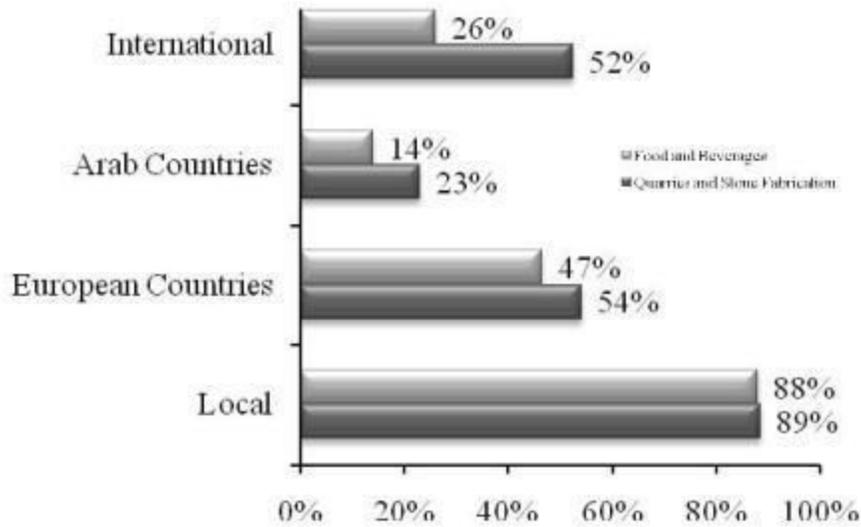
Most questions cover new or significantly improved goods or services or the implementation of new or significantly improved processes, logistics or distribution methods, organisational and marketing innovations. The CIS describes the innovation process, measure its economic weight, evaluate its effects, and appraise its mechanisms (cooperation, resources, obstacles, etc) over a certain period of time. It enables producing comparable indicators based on harmonized methodology by which a representative sample of the chosen sector is approached to fill in the survey questionnaire.

The results brought are very promising indicators and show high innovative potentials in both sectors. Employment, export, and revenues are clearly improved for innovative enterprises. It is found that lack of cooperation between the industrial sector and the higher education and research and development institutions is a major problem that should be tackled in order to strengthen the enterprises ability to innovate.

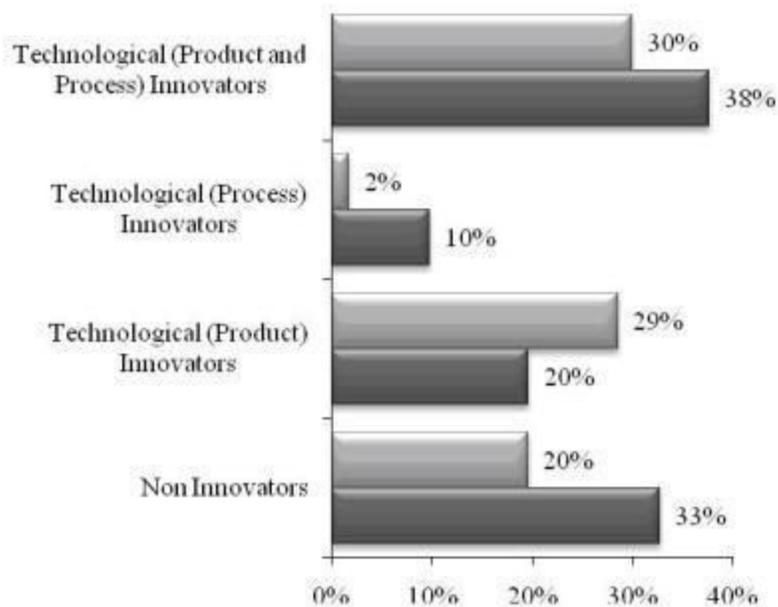
### Sample distribution with regard to location



### Geographic markets distributions for both sectors



### Technological innovation

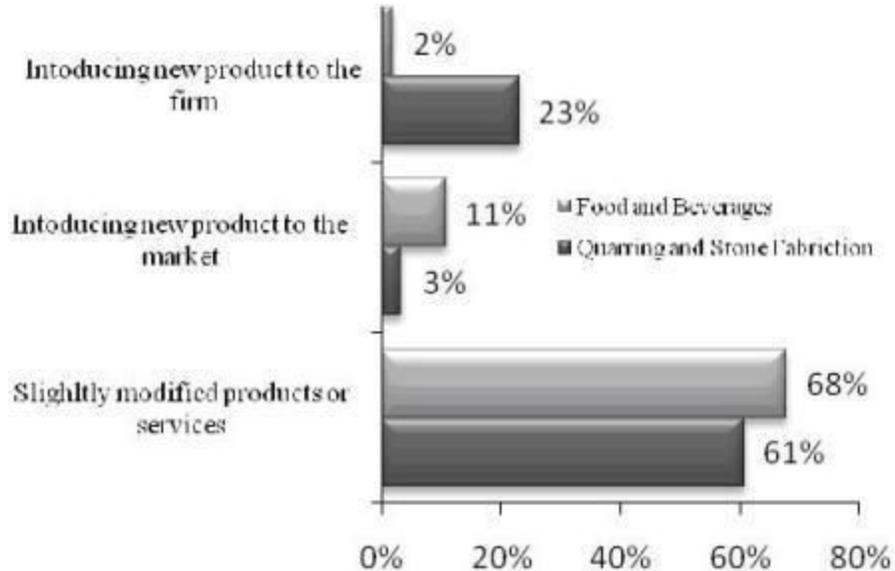


### Expenditure of enterprises on technological innovation activities

- The expenditure of enterprises on technological innovation activities during the period 2006-2008 was nearly 35 million Dollars and distributed as 82% for food and beverages sector and the rest for quarrying and stone fabrication sector.

- The major expenditure of 80% went to acquisition of new machinery and software in both sectors.
- Expenditure on R&D activities amount at an average of 11% of total expenditure in both samples, favoring in house R&D activities.
- These figures reflecting expenditure on R&D are promising and policy makers should establish instruments of a STI policy that encourage cooperation between research institutions and industrial sectors.

It is noticed that in both sectors contribution of innovation to total turnover comes from technological innovation in products with slight modification. More than 20% of quarrying and stone fabrication innovators have contributions to turnover coming from introducing new product to the enterprises. Such outcome is relevant as in the last five years stone and marble sector experienced high competition in the local market with the increase in construction activities in Palestinian districts and elsewhere.

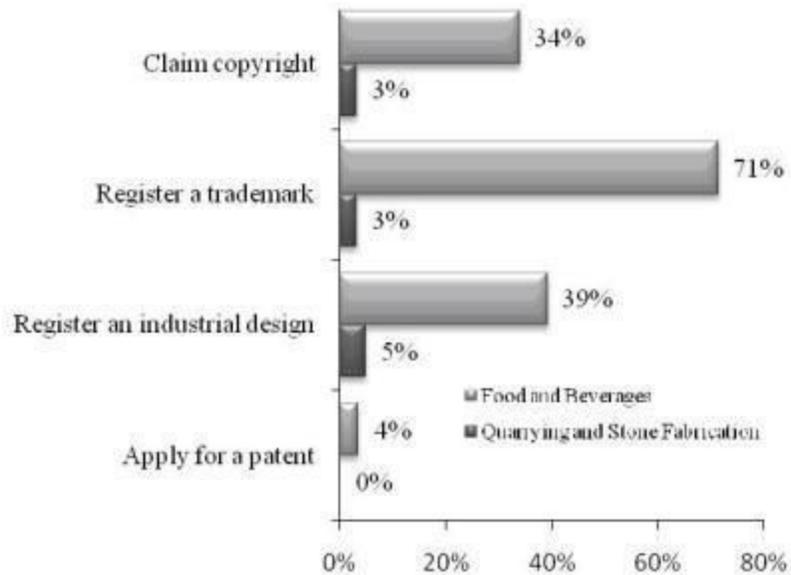


For the technological innovation in process, nearly most innovators in both sectors agreed that contribution to their turnover came from introducing new O&M systems, improving their products' logistics, and manufacturing processes. In both product and process innovation activities, it is the enterprises themselves that are directly responsible for the activities. This is confirmed also by the feedback coming from both sectors regarding the source of information and knowledge that enhances the innovation in their enterprises, were both agreed that the major source of knowledge is the enterprises themselves. Minimal relevant information is fed from higher education or research institutions. This is the contrary when compared to developed countries where innovative enterprises do not innovate alone but in the context of a network. In Europe, e.g. and particularly with respect to formal forms of cooperation, the percentage of innovative enterprises that are involved in R&D collaboration with one or more partners ranges, depending on country, from about 50% to—in the case of Denmark-97%.

## **Employment**

Effect of innovation on employment trend showed most increase for those process and product innovators enterprises, and less increase for those firms who experienced product innovation and the least for those of process innovation activities only. This is to some extent compatible with that in the European countries.

## Intellectual Property Rights



## Hampering innovation activities

- It appeared that cost of innovation as a factor hampering innovation is the most important one. This includes; lack of internal and external funds and the high cost of innovation activities.
- The second factor is the knowledge which includes; unavailability of qualified personal and lack of information on technology and market.
- Again, such outcomes require careful attention from the relevant PA policy and decision makers.

## Conclusion

Although there exist no national developed STI policy in the PA, but the survey brought promising outcomes that should be carefully considered by the policy and decision makers. It is seen that there are level of innovations in two major industrial sectors with positive impacts indicated on turnover, employment, and exporting activities. In terms of R&D serving innovation, there are also indicators that should be considered when preparing national STI policies and strategies. Relevant potential in both industrial and research institutions should be considered by and cooperation incentive instruments should be prepared. Also, it is important to direct academic programs to serve the local economic development as this will also build the cooperative links needed.

## Acknowledgments

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## Releases (Arabic Version)

[A special bulletin on innovation in the sectors of industry, stone, marble, food and beverage.](#)