Regional Distinctions and Levels of Industrial Production Technology

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Extended Abstract

Introduction

Although the products of each region could be used as an indicator for the welfare of that region alone, but in new literature of this field, not only production but also the level of technology used in production is considered as fundamental factor for ranking regions based on level of development, particularly sustainable development.

Meanwhile, the unbalanced spatial distribution of resources and production factors cause different potentials for different regions and therefore it requires accurate regional and national planning and identifying production capabilities. However, labor force is the most important economic variables that distinct regions.

Quality of labor that measured by level of education and skill level in literature, like other social and economic variables can strongly affected by region. In other words the different levels of quality of labor force in different regions can be seen. However, in prevalent classifications, quality of labor force in each region considered as an indicator for determining the level of technology of economic sectors including industry.

In other words, quality of labor force in the industrial sector shows the technology and, consequently, different levels of labor quality in manufacturing industries distinct levels of technology. Regional distinctions by technology approach were less noted in Iran and base on the knowledge of the researchers in this article there is no research in this field in Iran. Therefore, surveying the level of technology in manufacturing industries in Iran with regard to human approach is the main purpose of this paper.

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Methodology
Technology level of industrial firms according to three basic criteria of production, value added and employment in 1995, 2000 and 2005 (the first year of second, third and forth development plans) examined. Quality of labor force used to determine level of technology based on skill level and by the engineers and technicians ratio to the total number of employees. According to this factor, industrial firms have been classified into three categories: High Technology (HT), Medium Technology (MT), and Low Technology (LT).

If the number of engineers and technicians working in the firm in comparison to all employees is less than 15 percent, the firm is LT. If this ratio is between 15 to 20 percent the firm is MT and if the percent is more than 20 percent, firm is in the group of HT. However, in reports published by the World Bank and United Nations for international comparison of regions and based on CIP, HT and MT productions is in one group and so this study uses the same method to analyze the provinces in Iran.

Results and Discussion
Although production in each region or country is the important indicator in economic position of that region, but new studies in this field has shown that this indicator is not and also should not be the only factor for determining regions in terms of development and especially sustainable development. For example more production can be combined with abundant pollution and so disrupt the sustainable development. Therefore in new literature, not only production but also technology level as well as production is the basic indicator for ranking regions and it is expected that unbalanced spatial distribution of resources and production factors had different potentials for different regions. This study investigated the regional distinctions in levels of industrial technology.

Conclusion
This study shows that the level of technology in the manufacturing industries of Iran strongly influenced by the location of industrial firms and determining technology level did not change this result. From a policy perspective, this result means that neglecting the level of technology used in production and making decisions only based on production amounts and ranking regions based on this indicator may have unreal results that do not match to sustainable development indicators in world.

Keywords: Regional Distinctions, Level of Technology, High and Medium Technology, Labor Quality.