

Chapter 5

Institutional Overview of Technology: Schumpeter and Veblen

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ABSTRACT

There has been an intense debate on the reasons of variations in economic performances of different countries. Institutions and technological structure are among the leading determiners. Institutions are formal and informal constraints affecting investments in physical/human capital, and technology. Factors like economies of scale, technology, education, or accumulation of physical and human capital are not all for economic growth, which itself represents political and economic institutions as the basis for the fundamental differences in economic development. At the end of the 20th century, economic thought oriented towards analysis of the institutional environment. In the 1990s, significant steps were taken with Heterodox approaches to provide more consistent alternatives to the mainstream economy. The institutional economy shows an alternative approach that adds more depth to the discussions in this area. The main objective of this chapter is to point out the contributions of Schumpeter and Veblen.

INTRODUCTION

As a result of increasing attention on the relationship between economic performance and efficient use of resources, and hence advanced technology, the development, adaptation and use of new technologies has become the strategic priority of the countries at different development levels. Research and development (R&D) as a direct source of technological improvements supports growth, increase the competitiveness of countries and their share in international markets. The growth gap between developed and developing

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countries is due to technological capabilities, R&D activities, institutional and structural problems, and macroeconomic instability.

Economic literature closely relates the quantity and quality of labor, capital accumulation, saving rates, innovation, entrepreneurship, learning by doing, public investments, technological development and R&D activities, etc. with economic growth and in this sense, the transformation observed in the world shows a great parallelism with the theoretical developments. Although classical economists suggest that machine use positively affects productivity, they have not exclusively emphasized the phenomenon of technology as a determinant of growth. Keynesians considered capital as the main determinant of growth per capita. According to Neoclassics, income levels of countries converge in the long run. Considering innovation and hence newly organized knowledge express technology, the Neoclassical assumption of external and fixed technological development has become questionable. The efficient use of technology and technological progress itself require appropriate institutional and social structures.

Technology is not only about tools, but also is related to human work style and thinking. Basic changes in technology reflect and change the vision. As a result of the effective use of technology, the time period between scientific discoveries and its implementation has shortened. Transformation of economic structure also changes social structure. Progress in science and technology is connected to culture, where the change is reflected. In a knowledge-based economy, which is also called as information society or new economy, human beings and technology are at the center of economic development.

Studies within the framework of mainstream economics are insufficient in analyzing the complex structure of technological phenomena. Apart from the mechanistic and deterministic assumptions, an institutional economic outlook will provide a more explanatory approach to the causality in economic growth. Technological approaches that have come to the forefront in the evaluation of technological innovation as the driving force of social and economic transformation have an important place in the understanding of the subject and are used predominantly by the evolutionist and institutional economists. In this context, theories of Thorstein Veblen and Joseph A. Schumpeter, can be regarded as representatives of traditional evolutionary economics. In Schumpeter and Veblen's studies, the most important phenomenon that provides the change is technological progress, and technology is one of the main factors in realizing social-institutional transformation, and economic development.

In the literature studying economic performance of countries, it is observed that non-economic factors are considered as important variables, especially after 1990s. Demographic, cultural, institutional structures, government policies and innovation capacity are the variables that should not be ignored in explaining the growth rate differences. When examining the differences in economic performance among countries, institutional structures, technical capacities and human capital need to be primarily taken into consideration.

The role of institutions is of great importance both for Schumpeter and Veblen. This chapter examines Schumpeter's relationship with Veblen through technological change and determinism, individualism and institutions, and evaluates the views of both, who share the view that technology has revolutionized capitalism and has serious implications for the future of the system.

The role of technology in institutional change and economic growth under the views of both Schumpeter and Veblen will be discussed respectively and comparatively in two parts of this chapter. Thus, the evolutionary process of entrepreneurship, and its relationship with technology will be put forward. What Schumpeter and Veblen meant when talking about evolution and the role of technology on the economic system will be explained. This chapter will contribute to a better understanding on the ideas of two lead-

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