

3.13. JAN TINBERGEN (born 1903)



As more countries become industrialized and operate in the highly competitive world market, the use of econometric models to plan and encourage economic growth has become **crucial**. Economists have made vast progress in developing economic and statistical tools to use in these planning efforts.

Jan Tinbergen has been one of the pioneers in this important field.

STARTING IN THE HARD SCIENCES

Jan Tinbergen was born on April 12, 1903 in the Hague, Netherlands. His parents' enthusiasm for the sciences turned into a lifelong passion for several of their five children: Luuk Tinbergen became a professor of zoology, Nikolaas Tinbergen shared the 1973 Nobel Prize in biology with a colleague, and Jan Tinbergen won the first Nobel Prize awarded in economics in 1969.

At the age of 19, Tinbergen enrolled at the University of Leiden, where he studied physics. Although his **scholastic** energies were devoted to the hard sciences, a concern for socioeconomic **issues** was evident in his extracurricular activities. A member of the Socialist Youth Association, Tinbergen was also actively involved in the Social Democratic Labor Party. His social conscience led him to refuse **army conscription** which was **mandatory** in the Netherlands at the time. Government officials allowed him an alternative- a job in prison administration in Rotterdam. Later he was transferred to the Government's Central Bureau of Statistics in The Hague. His job there, to develop quantitative models of the ways markets and economies work, combined the best of both worlds for Tinbergen – the mathematical background he had received as a physics major and his interest in social issues.

He returned to Leiden briefly in 1929, when he submitted his doctoral dissertation to the University. The dissertation, entitled "**Minimum problems in Physics and Economics**", provided a preview of the work to which Tinbergen would dedicate his life. With this work, he began **to forge** the path for a new generation of economists who would approach economic issues using mathematical techniques.

After receiving his Ph.D. Tinbergen returned to the Central Bureau of Statistics, where he joined a newly created department for business cycle research. In addition to holding this full-time position, he taught economics at the University of

Amsterdam and development planning at the Netherlands School of Economics in Rotterdam. In 1945 he left the Central Bureau of Statistics to become director of the Central Planning Bureau of the Netherlands, an agency established to direct economic policy.

Here Tinbergen performed much of the research for which he would later receive the Nobel Prize.

CONTRIBUTION TO ECONOMICS

The goal of Tinbergen's research was to provide a model with which governments could effectively direct economic growth. During the 1930s and early 1940s he developed several quantitative theories of business cycles, then turned his attention to a mathematical theory of economic growth. The endless columns of numbers and mathematical formulas he analyzed and tested led to his development of practical policy tools. Tinbergen showed that government manipulation of three instruments – **the level of government spending, the level of taxes, and the rate of growth of the money supply** – could be used in an effort to achieve full employment, a **stable price level, and a balance-of-payment equilibrium**.

In 1969 Sweden's Royal Academy of Sciences awarded Tinbergen the first Nobel Prize ever given for Economic Science. The award, which Tinbergen shared with Norwegian economist Ragnar Frisch, was for their achievements in the use of econometrics as a tool for macroeconomic policy.

A brilliant **man with an eye for** the practical application of his work, Tinbergen has devoted the latter half of his career to developing planning models for less developed countries. He has traveled extensively as a consultant to many countries, including India, Turkey, Suriname, and Syria. Concerned about the social issues involved in economic growth, he has argued for international development policies that would result in more equitable distribution of the world's resources.

His biographer, Henk Bos, recalls that, after Tinbergen's selection for the Nobel Prize in Economics had been announced, "a **frequent opinion** expressed was that he would have been an equally worthy candidate for the Nobel Peace Prize".

Tinbergen's **grave** concern for the world's future peace, culture, and welfare confirms this view of the driving force of his great achievements as an economist."

Task

1. What was the reason for the use of econometric models?
2. What was J. Tinbergen busy with at the University of Leiden?
3. What sciences did he combine to perform his job in the Hague?
4. What role did his work "Minimum Problems in Physics and Economics" play for a new generation of economists?
5. What was he busy with at the Central Bureau of Statistics?