

CHAPTER 1

THE SCIENCE OF MACROECONOMICS

Objectives:

- To review the meaning, goals, and focus of macroeconomics.
- To give an overview of the methods and approach of macroeconomics.

I. The Meaning of Macroeconomics.

- **Def:** *Macroeconomics is the study of the behaviour and performance of the economy as a whole.*

II. The Goals of Macroeconomics.

- to understand the past and present performance of the economy;
- to provide the basis for informed forecasts of the future performance of the economy;
- to evaluate the effects of economic policies on the performance of the economy.

III. The Focus of Macroeconomics.

- Macroeconomics focuses on the behaviour of **key macroeconomic variables** including:
 - **Real GDP [gross domestic product]** - a measure of aggregate output, income, and spending.
 - **The inflation rate** - a measure of how fast prices, in general, are rising.
 - **The unemployment rate** - the proportion of the labour force out of work.
 - **The interest rate** - the cost of borrowing and return to saving.
 - **The exchange rate** - the rate at which one country's currency trades for another.

IV. Canadian Historical Data on Real GDP, Inflation, and Unemployment.

1. Data on **real GDP** for Canada since 1900 reveal two patterns of variation over time:
 - a **long-run upward trend** - the result of long run **economic growth** [real GDP *per capita* is 9 times higher now than in 1900];
 - a sequence of **short-run cyclical fluctuations around trend** - the result of the **business cycle**. [In *recessions*, such as 1981-2 and 1990-1, 2008-09, real GDP actually **falls.**]

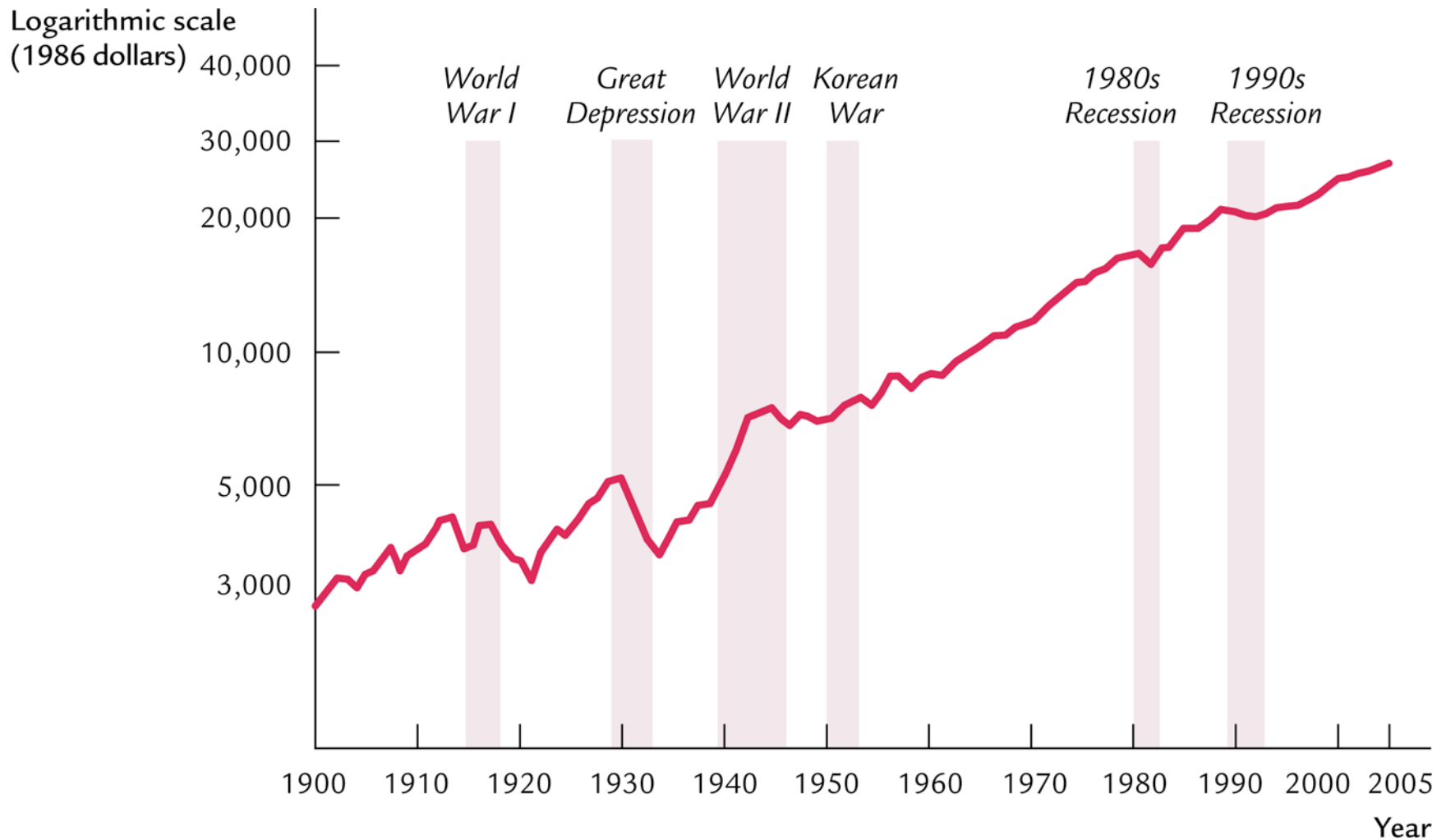


Figure 1.1 Real GDP per Person in the Canadian Economy
Mankiw and Scarth: Macroeconomics, Canadian Third Edition
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2. Data on the **rate of inflation** in Canada since 1920 reveal that:
- Before 1945 the average rate of inflation was approximately **zero** - periods of **deflation** [**falling** prices] were as common as periods of **inflation** [**rising** prices];
 - From the 1950s to the mid-1970s there was an **upward trend** in inflation;
 - Since 1980 the inflation rate has **fallen** significantly due to two episodes of **“tight money”** and resulting high unemployment - one in the early 80s and one in the early 90s.
 - Since the early 1990s the inflation rate has been in the narrow range of 1-3% per year - consistent with **Bank of Canada targets**.

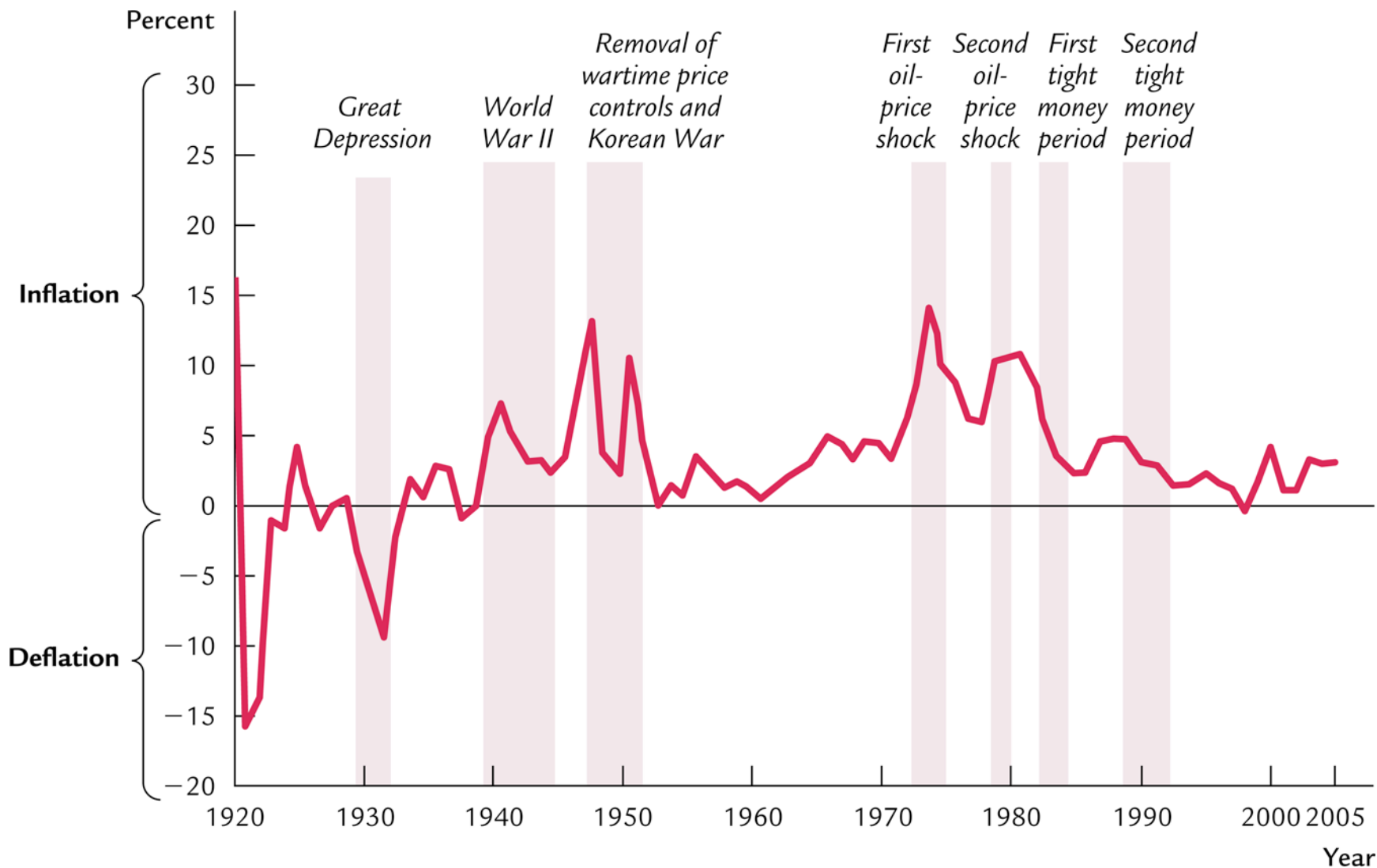


Figure 1.2 The Inflation Rate in the Canadian Economy
 Mankiw and Scarth: Macroeconomics, Canadian Third Edition
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3. Data on **unemployment** for Canada since 1920 reveal that:
- The unemployment rate is strongly ***countercyclical*** - rising in recessions and falling in expansions;
 - Unemployment was **highest in the 1930s** [the Great Depression] and **lowest in the 1940s**;
 - From 1945 to the 1990s there was a gradual **upward trend** in unemployment.

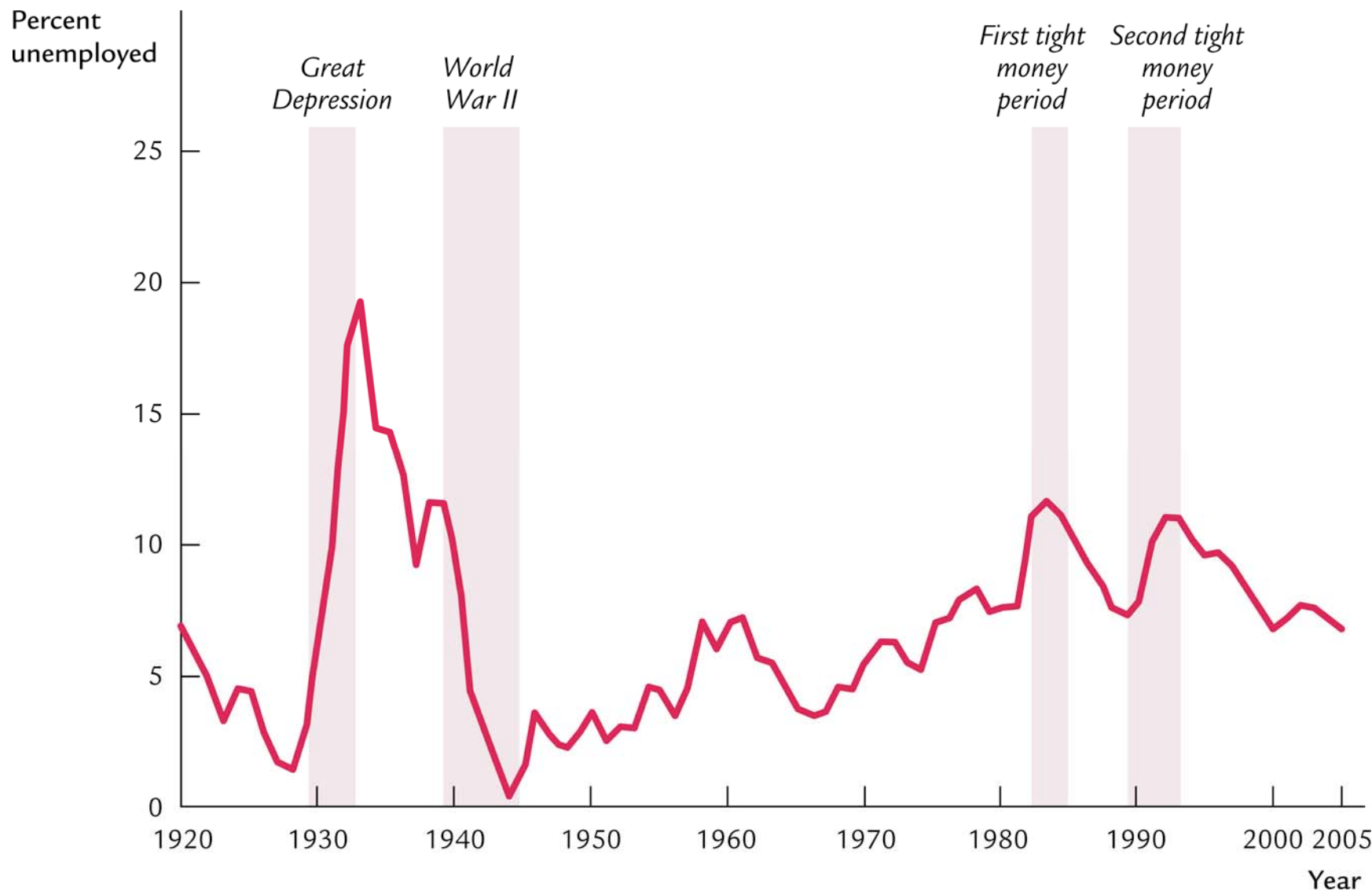


Figure 1.3 The Unemployment Rate in the Canadian Economy
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V. The Methods and Approach of Macroeconomics.

- ❑ Macroeconomics employs the **scientific method** consisting of the formulation and testing of **hypotheses**.
- ❑ An hypothesis asserts the existence of a **cause-and-effect relationship** between one or more **independent variables** and a **dependent variable**.
- ❑ Example:

The **consumption function hypothesis** asserts that total consumer spending [the **dependent** variable] varies directly with total disposable income of consumers [the **independent** variable].

- ❑ All economic hypotheses are subject to a process of **empirical testing** in which actual economic data are used to test the validity of the predictions of the hypothesis.

- ❑ An hypothesis whose predictions are NOT consistent with the data is rejected or modified.

VI. Macroeconomic Models.

- **Def:** *A macroeconomic model is a simplified, conceptual description of the economy which provides a logical and consistent framework for understanding the economy.*
- A **macroeconomic model** is formed by assembling a set of empirically-valid hypotheses linking macroeconomic variables.

- A macroeconomic model contains two types of economic **variables**:
 - **Endogenous variables** - those whose values are determined **within** the model;
 - **Exogenous variables** - those whose values are wholly determined **outside** the model.

- **Exogenous** variables are the **input** into the model while **endogenous** variables are the **output** of the model.



Figure 1.4 How Models Work

Mankiw and Scarth: Macroeconomics, Canadian Third Edition

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2. Varieties of macroeconomic models.

□ There are two main types of macroeconomic models:

- **Classical models** (“fresh-water economics” - University of Chicago)
 - best for studying the behaviour of the economy in the **long run** [over 5 years];
 - assume **prices are flexible** and adjust to ensure full-employment.

- **Keynesian models** (“salt-water economics” - Harvard University)
 - best for studying the behaviour of the economy in the **short run** [year to year];
 - assume **prices are “sticky” or inflexible** and don't adjust in the short run to ensure full employment.