Chapter 1: Objectives and Overview

1.2 The Normative Approach to Policy Analysis

- **Economic efficiency**: trying to make the per capita benefit from the consumption of goods and services as high as possible.
- **Macroeconomic stabilization and growth:** Have to resist the cyclical swings in business activity and employment. Goals are to smooth the business cycle, keep unemployment rates low and stable, keep inflation rates low and stable, and assist in promoting economic growth.
- **Fairness:** Seeks to make the overall size of the economic pie as large as possible. For example, the Canadian system of taxation and social welfare that taxes the relatively well off and gives money and other resources to the poor. Also relates to everyone getting same medical, no discrimination and seeking to protect the interests of the children.
- **Other social objectives:** For example governments try to promote national unity or certain aspects of cultural identity as goals in themselves. Other examples include limitations to gambling and alcohol consumption, and also trying to limit environmental damage.

1.3 The Positive Approach to Policy Analysis

Factors that influence policy making:

- Voting
- Special interest groups (business lobbies, which spend time and money trying to influence government policies)
- Public sector managers – elected as politicians

1.4 The Major Policy Areas

Certain policy areas that are particularly important in what they specifically or primarily target business:

- International trade policy
- Environmental and resource policy
- Competition policy
- Regulation and public enterprise
- Innovation policy and intellectual property
- Macroeconomic policy

Government policy influences business activity in a wide variety of ways. Policy areas, such as **regulation** are often directed towards specific firms or industries, while others, such as **macroeconomic policy**, address the overall economic environment.

Chapter 2: Four Useful Economic Concepts

2.2 Opportunity Cost

Opportunity cost of any activity is defined as the value of the best forgone alternative.

2.3 Marginalism

The marginal effect of any activity is the effect of doing the activity just a little bit more.

Paradox of Value: Diamonds/Water example -> Depends on the scarcity/marginal value of the resource.

Marginal Principe: States that any policy or activity should be carried out as long as the marginal benefit exceeds the marginal cost. One implication of the marginalist principle is that the best way to allocate a scarce resource between two projects is to equalize the marginal benefits.

2.4 Economic Incentives

People are expected to follow economic incentives. Policy changes can also induce intend incentives that take policy makers others by surprise, an example of the so-called law of unintended consequences.

For example:

- How Canadian government decided to provide cash subsides for research and development. The unintended consequence was how many conducted very highly dubious research and development.
- Tennis club decided to provide free membership to children, however, virtually every child starting signing up. This resulted in kids who actually wanted to learn, not learning.
- Buy out programs for firms – It increased the incentive to leave and make downsizing an organization easier. However, this resulted in good workers leaving (to get the buyout package) and normal quits dropping sharply.

2.4 Economic Efficiency

Production Efficiency: No inputs are wasted and a given level of output cannot be produced with fewer inputs.

Management Efficiency: Stronger concept, meaning that cost is minimized for the output chosen. It requires production efficiency.

Pareto Efficiency/Allocation Efficiency/Economic Efficiency: Resources are allocated in such a way that it is impossible to make everyone better off without making someone else worse off. Production and management efficiency are both necessary conditions.

Deadweight Loss: Represents a net gain or surplus that could be generated, without harming anyone, by moving from the inefficient allocation of resources represented to the Pareto efficiency allocation.

Pareto Improvement: Takes place if some people can be made better off and no one is made worse off. They are rare, because most policies generate both winners and losers.

Potential Pareto Improvement: Takes place if the winners gain enough to be able to fully compensate the losers and still be better off (don't actually have to compensate).

To compare intergenerational issues, Pareto criterion alone is not sufficient to deal with the trade-off. We have to consider distributional effects and efficiency considerations.

1. If a situation is efficient, Pareto efficiency is meant.
2. If a situation is said to be inefficient, Pareto inefficiency is meant.
3. If we say that one situation is more efficient than another or that there has been an improvement in efficiency, it means that the potential Pareto criterion is satisfied.
4. If management efficiency or production efficiency are being discussed, than those terms are used explicitly. Production efficiency is necessary for management efficiency which is necessary for Pareto efficiency.
5. Allocational efficiency = economic efficiency = pareto efficiency

Static Efficiency: One-period analysis

Dynamic Efficiency: Deals with circumstances that evolve over time.

Pareto efficiency includes both static and dynamic efficiency.

Chapter 3: The Normative Analysis Government

3.2 Philosophical Foundations of Government Policy

Economic Freedom: Idea that individuals should be free to enter voluntary agreements with other individuals concerning the production, distribution, and consumption of economic goods and services.

Consumer Sovereignty: Means that each individual has a right to his or her own preferences and tastes for goods and services, insofar as those tastes do not impinge directly on the rights of others.

3.3 Private Enterprise and Individualism

Market-based economic systems with a limited role for government are consistent with the principles of individualism For example, China's economic transformation in a single generation, was achieved by primarily by embracing economic freedom-allowing market-based reforms (increase in living standards and real income per capita).

3.4 Adam Smith and the Competitive Paradigm

"An individual generally neither intends to promote the public interest nor knows by how much he is promoting it…By directing industry in such a manner as its product may be of greatest value, he intends only his own personal gain, and he is in this aim…led as if by an "invisible hand" to promote and end which was no part of his intention." – Adam Smith

Smith argued that market transactions, undertaken through the motive of self-interest, promote social welfare to a greater extent than do rival systems of organizing production, such as command systems. His main insight is very simple: if an exchange between two parties is voluntary, it will not take place unless they bot believe they can benefit from it. This is the principle of voluntary exchange.

IMPLICATION: Government might have a legitimate role in preventing concentrations of monopoly power. Also recognized for markets to function smoothly, governments must allow private property and provide mechanisms for enforcement of private contracts and the protection of private property and personal safety.

3.5 The Meaning of Competition

1. Buyers and sellers are sufficiently numerous that no buyers or seller has control over price.
2. The product is homogeneous-each seller sells the same product.
3. Buyers and sellers have access to all information relevant to their production and consumption decisions and can transact easily.
4. There is free entry and exit in the long run.

First theory of welfare economics: Under perfect competition and provided certain other conditions are met, private markets achieve Pareto efficiency.

Second theorem of welfare economics: If redistributional goals are considered, then Pareto efficiency can be maintained by redistribution basic income and allowing markets to open freely without intervention.

3.6 Normative Reasons for Government Intervention

Policy response to government intervention in a monopoly:

1. Encourage or enhance competition so that a workable level is achieved
2. Regulate industry directly, limiting the prices that can be charged and imposing other performance requirements
3. Direct government ownership, often called public enterprise

3.7 Efficiency and Market Failure

Market Failure: A situation in which private markets fail to achieve Pareto efficiency.

There are four major sources of market failure:

1. Imperfect Competition:
    - While the government cannot improve upon every departure from perfect competition it does have a role in promoting competition and in regulating, or at least closely monitoring, areas where imperfect competition is inevitable.
2. Asymmetric Information:
    - The less-informed party will not know the true marginal benefit to be derived from the transaction as clearly as the more informed party does. Firms have incentives to invest in their reputations for quality so that consumers will trust the firm's product and there are also reports (Consumer Reports) that help consumers with picking firms.
3. Incomplete Property Rights (Externalities and public goods):
    - A public good is **nonrival** in consumption: even though one person consumes the good, others may also consume it.
    - A public good is **nonexclusive**: it is impossible (or at least very costly) to exclude anyone from consuming the good.
    - Public goods lack property rights. Since no firm can expect to receive much payment for providing a public good, firms have very little incentive to provide such goods. Government intervention is therefore necessary.
    - Externalities also arise because of a failure of property rights. They arise when some person or group is affected by the economic activity of others without markets to price the effect. In the absence of government regulation, activities that generate negative externalities will be overprovided and activities with positive externalities will be underprovided.
4. Poorly designed government policies (aka government failure):
    - Rent control policy just forces long waiting lists, under-the-table payments, and general inefficiency in the housing market.

3.6 Fairness and Other Rationales for Policy Intervention

- Other rationales for intervention are a catch-all category that includes normative or public interest objectives that do not fit in to the standard rationales for policy. Historically, the most important extra considerations are military. For example, many countries have taken the view that having a domestic steel industry is very important for national defense.
- Other rationales also include the importance of influencing Canadian culture and paternalism.

11.2 Informational Market Failure: The Lemons Problem

Adverse Selection: Under conditions of asymmetric information, low quality items will tend to dominate the market.

- There are good card and there are bad cars. However, the buyers do not know which car is good or bad. The buyers will tend to pay less assuming it's a bad car, however, the owners with good cars will not be willing to sell. This will further decrease the price of cars and eventually very few good cars would be traded.
- Standard regulations for doctors in many areas can be viewed as a response to the lemons problem.

12.8 Public Goods

Goods that are rival but nonexclusive are called **open access goods**.

Goods that are nonrival but exclusive are called **club goods**. A nonrival but exclusive good can be a painting.

- Examples of public goods include national defense, public parks, police services and court system.

12.8.2 The Efficiency Condition for a Public Good

- The efficient outcome for a public good, as implied by the marginalist principle, is that a public good should be produced up to the point where the marginal social benefit equals the marginal social cost.

12.8.3 The Free Rider Problem

- The basic incentive problem of public goods resulting in market failure is that consumers of the good have no economic incentive to pay for the good, as they cannot be excluded even if they do not pay. They have an incentive to be free riders. This is the free rider problem.

13.3 Market Failure and Innovation

Market failure in the innovation process is one reason for this, and it is this market failure that provides a normative justification for the significant role of government policy in promoting goods.

13.3.1 Innovations as Public Goods

- The free rider problem would greatly reduce incentives to develop newer things, as no one would have an incentive to do the expensive research necessary. If a patent makes it possible for an innovator to treat the new knowledge embodied in an invention as intellectual property and can prevent others from using it, then the ability of potential rivals to free ride is greatly diminished and the incentive to innovate is enhanced.

13.3.2 Innovation Externalities

- When one firm conducts R&D, the researchers often present research papers at scientific conferences and public in scientific journals. This information is a positive externality because it can help other people with their work. -> Known as knowledge spillovers

13.3.3 Informational Asymmetry

- Problem is that outside investors typically know much less about the proposed innovation than the innovator does. This informational structure creates a market failure due to informational asymmetry of the hidden characteristics type. Creates lemons problem / adverse selection.

13.3.4 Effects of Market Failure on Innovation

- Intellect, information, incentive and investments are necessary for successful innovation (industrial revolution had all 4, which is why it excelled)
- Components largely depend on government policy, including polices regarding public education, a well-developed university system, intellectual property protection, and appropriate support and regulation of the financial system.

4.6 Trade-offs Between Efficiency and Fairness

- The first point economists usually make about public policies dealing with fairness is that there is a trade-off between fairness and efficiency, principally because of incentive effects.

Examples:

- Free Medicare – If medical attention is free, trips to the doctor will be made more frequently than necessary and will sometimes be used by lonely people as a way of getting some attention. In general, there will be no incentives for efficiency.
- Unemployment insurance – In unemployment insurance is very generous, unemployed workers will remain unemployed longer and be much choosier about the jobs they will accept. This raised the natural rate of unemployment and increases the total efficiency losses associated with employment.

Chapter 9: Environmental Policy and Externalities

9.2 Externalities: Definition, Analysis, and Examples

9.2.1 Defining Externalities

Externality: Can be defied s arising when a consumer's well-being or a producer's productive capacity is directly affected by the actions of other consumers or producers. An effect that operates indirectly through prices is not an externality.

- Environmental externalities consist of acid rain, car exhaust, airborne emissions and radiation from accidents in nuclear power plants. All of these pollutants have significant health effects on humans, wildlife, and plants.

9.2.2 Externalities as Market failure

- Externalities cause market failure: they cause private markets to be inefficient. Market failure can be understood by noting that externalities cause a failure of the marginalist principle for social efficiency – that social marginal benefit should be equated with social marginal cost. A negative externality results in a marginal cost of an activity that is not borne by the firm or person undertaking the activity, but is borne instead by others. A profit-maximizing firm generating an externality will equate its own private marginal cost to the marginal benefit of the activity, but will ignore the marginal costs imposed on others.
- The public interest would not be served by minimizing pollution, and certainly not by its elimination. Literal elimination of pollution would require stopping most human activity. Pollution should be reduced only so far as the costs of doing so are less than the benefits.

9.2.3 The Simple Economics of Pollution Abatement

In the long run, it is often possible to undertake other forms of pollution abatement. The firm can install scrubbers on the mill to remove pollutants, install new and cleaner machinery, or take some actions to reduce pollution. The problem here is that the private marginal benefit of abatement is much less than the social marginal benefit of abatement. Firms will have an incentive to undertake abatement only up to the point where the private marginal benefit of abatement equals the private marginal cost of abatement (positive production externality, but don't produce optimal amount).

9.2.4 Technological and Pecuniary Externalities

Suppose wheat famers increase their demand for fertilizer used in wheat production, causing the price of fertilizer to rise. Flower producers who also use fertilizer would therefor experience higher costs and lower profits. The actions of wheat producers in seeking to buy more fertilizer have therefore affected the welfare of another party. This is known as pecuniary externality – an externality caused by price effects. This is not the case of a market failure and does not require government intervention.

9.2.5 Transaction Costs and Incomplete Property Rights

- Two fundamental causes of externalities are high transaction costs and incomplete property rights.
- If the transaction costs of operating a market are high compared to the potential gains from trade in the market, then the market will fail to exist.

9.2.6 The Coase Theorem

- If the only issue underlying an externality problem is incomplete property rights, then the externality can be solved or removed by establishing property rights.
- As was first pointed out by Coase, as far as achieving efficiency is concerned, it does not matter who gets the property rights, as long as someone gets them. If there are no transaction costs, then bargaining between economically rational parties over an externality will lead to an efficient outcome, provided property rights are clearly defined and enforced.
- Assignment of property rights does, however, affect the distribution of benefits between he parties.
- In most important externality examples it is not feasible to assign property rights. For example, we cannot assign rights to the atmosphere or the ocean. And even when property rights are assigned, the transaction cost is very expensive.

9.3 Policy Solutions to Externality Problems

9.3.1 Internalizing Externalities

- One response to externality is to internalize them, which means placing both the economic agent generating the externality and the parties affected by it under one management.

9.3.2 Quantity Controls and Standards

- Factories are constrained to limit themselves to certain levels of pollution or to install specific types of pollution abatement equipment.

9.3.3 Taxes and Subsidies (what most economist prefer)

9.3.4 Cap and Trade Systems

- Cap and trade systems, sometimes called tradable pollution permit systems, seek to combine quantity controls with market incentives. One component of a cap and trade system is the cap – a maximum allowed quantity, or quota, of a pollutant, such as sulfur dioxide. This quota is divided into permits that grant the right to emit a certain amount of the pollutant per year. Sometimes, the permits are given to polluters in proportion to the amount discharged annually prior to the imposition of the cap.

9.4 Global Warming

- The earth has gone through many warming and cooling cycles in history. At present the earth is warming. The relative importance of the possible causes of global warming is slightly more uncertain as year-to-year variations in temperature are influenced by several factors, including changes in ocean currents and solar activity.

9.5 Hazardous Waste and NIMBY Problem

- NIMBY refers to the fact that communities will usually strongly resist local placement of hazardous waste dumps or other facilities that might generate negative externalities.

9.6 Traffic Externalities

- Externalities caused by crowding and getting in other peoples' ways are often called congestion externalities.
- Peak hour tolls are an option to reduce congestion.

9.7 Cost-Benefit Analysis and Discounting for Environmental Projects

- In evaluation possible environmental policies, cost-benefit analysis is often used. In comparing costs and benefits that arise at different times, a discount rate is used.
- For environmental projects the implications consist of how to determine discount rates, people move therefore would like short-term rewards and private sector returns may incorporate risk premiums.

9.8 Jurisdiction for Environmental Policy

- Some environmental externalities are primarily local in nature, such as urban air pollution or sewage treatment, whereas others are global in their effect, such as global warming. The jurisdiction for environmental policy is divided among all three major levels of government.

Chapter 5: The Positive Theory of Government

5.1: Introduction

- Elected policy-makers normally wish to be re-elected and therefore are influenced by voting patterns. In addition, policy-makers are subject to lobbying by special interest groups and may be influenced by such lobbying for a variety of reasons. Also, policy-makers might be influenced by their own direct economic self-interest.

5.2 Voting

- First issue is who should be voting? Criminals, teenagers, etc. The next issue is how voting should be translated into policy. There are two basic approaches: direct democracy and representative democracy.

Direct Democracy: Involved direct voting by citizens on policy issues. In Canada it is common at the local level (cities and municipalities). For example Quebec separation and BC HST.

- There are a limited options available to a voter in making choices. A voter may prefer the position of one candidate on one issue, of a competing candidate on a second issue.

5.2.1 Representative Voting

- In Canada, as in all modern democracies, the public elects representatives who are then responsible for the actual formulation of policy, a system of representative democracy.

Policy under representative government differ from that under direct democracy because:

1. Expert judgment: representative governments have the capacity to obtain expert information and may therefore by in a position to make more informed judgments about some policy matters.
2. Representative governments are more subject to interest-group lobbying than are private individuals. -> Why gun control in the US has made little progress (national rifle association).
3. Representatives are different from the population at large general, political have higher incomes, are better educated, and come from more advanced backgrounds than the average citizen.

5.2.2 Hotteling's Theory of Political Parties

- 3 assumptions of the theory: only two parties, each party wishes to maximize the number of votes it receives, voters are uniformly distributed over a single left-right dimension (not necessary).
- The prediction of this theory is that the two parties will cluster around the middle of the political spectrum. In practice, parties do not usually arrive at the midpoint of the spectrum by leapfrogging one another; they are more likely to approach the center by gradually moving from an extreme position. This gradualist dynamic path would be implied by a slight modification of Hotteling's theory. The end equilibrium of the process seems to be very representative of actual

party policies, where there are only a few differences of substance in overall party platforms of the major parties.

Two implications:

1. In a system dominated by two political parties, policy platforms between the two will not differ very much.
2. The policy platforms will closely match the preferences of the median voter. This is the median-voter principle.

- One fundamental problem, is that it does not take **intensity of preference**s into account.

5.2.3 Committee Voting and the Power of the Agenda Setter

Voting systems:

- Majority voting: each party votes for its own issue, and no one obtains a majority.
- Pair-wise voting: the person who sets the agenda, can determine the outcome of the decision made (not always the case -> 123,312,231). Known as the paradox of voting in a round robin system.
- Approval voting: each member of the committee votes for all the alternatives of which he or she approves, with the winning project being the one with the most approval votes.
- Point voting: each member of the committee is given a certain number of points to be allocated among the alternatives as he or she sees fit.

Different voting systems will generally produce different policy outcomes.

5.2.4 Vote-Trading

- Occurs when different members of the policy-making group form coalitions to support one another's policy proposals.

5.3 Special Interest Groups and Transfer-Seeking

- A second major external influence on policy-makers is interest-group activity.
- The two types of special interest groups those who are concerned primarily with their own economic self-interest (Canadian Labor Congress, Canadian Federation of Independent Business, etc.), and those trying to promote particular moral or social values (anti-abortion and pro-abortion).

5.3.1 Transfer-Seeking

Transfer-seeking (also called rent-seeking): Process of devoting resources to trying to obtain or retain economic benefits through the redistribution of the wealth of others, rather than by creating new wealth. For example, theft, charities, litigation, trying to obtain monopoly power, etc.

Transfer-seeking has three major consequences:

1. Resources consumed in transfer-seeking are wasted form the social point of view.
2. There is a wealth transfer from society at large to the transfer-seeker.
3. The policy induced by transfer-seeking usually has pure waste associated with it.

- The costs of transfer-seeking are high. The direct economic costs are substantial, but there is a secondary cost a well. If the general perception is created that rewards ins society are return to special privilege created by lobbying or dishonesty, then the motivated to succeed through the creation of new wealth is very much reduced

Service provision is not transfer-seeking. Also, we do not want to **eliminate** transfer-seeking.

1. The court system is an extremely inefficient way of marking transfers of income, but it is probably necessary that it be available for settling disputes, thereby maintaining certain principles of fairness, and to avoid even more costly methods of settling disputes, such as resorting to violence.
2. Charitable organizations are also transfer-seeking, but not many of us would speak out in opposition.

5.3.2 The Transitional Gains Gap

Examples: New York medallion taxy system and national dairy quota system.

5.3.3 Economic Interest Groups

Lobbying activity represents a very substantial amount of transfer-seeking. However, lobbyist have benefits as well:

1. Something lobbyist produce of value is: information. A successful lobbyist is one who can provide Cabinet ministers, members of Parliament, and senior public policy-makers with useful information.
2. They offset some basic public policy biases. Business lobbies and consumer lobbies can often be found arguing for policies that are closer to those suggested by normative policy analysis than are the polices offered by politicians. In the absence of these lobbies, governments would be even more tempted than they already are to try to gain short-term political advantage.

Interest groups are effective because the benefits of lobbying are concentrated and the costs are diffuse. Therefore, the beneficiaries have an inactive to get involved: individual losers do not/

5.3.5 Social Interest groups

- They are effective because members of social interest groups are often one-issue voters. They will vote for the candidate coming closer to their position on the issue they care about, regardless of other issues. They also make it difficult for policy-makers because they are prepared to spend their own time taking up the time and energy of busy politicians and government officials.
- The power of social interest groups suggests that tan organized minority can be very effecting in exploiting or at least controlling a disorganized majority (minoritarianism).

5.3.6 Interest Groups and Financing of Political Parties

- A significant fraction of campaign funds is provided through government programs (taxpayers). However, the other funds come from other sources such as interest groups.
- In 2012, the maximum allowable individual contribution in Canada was $1,100 per year. In the United States there is no limit.

5.4 Direct Self-Interest

Policy makers also make decisions that affect their own welfare directly, leading to conflicts of interest, and at the very least, policy-makers can be expected to take advantage of the prerequisites of their positions.

5.4.1 The Theory of Bureaucracy

Bureaucracy: A non-elected government body characterized by a hierarchical system of specialization that formulates and implements government policy (aka civil service and public service).

Niskanens theory states:

1. Bureaucracy carries out valuable programs that society at large and the elected government are willing to pay for.
2. They will maximize its own welfare. Difference between budget it receives for a program and the minimum cost of carrying out the program is called the slack. The slack is consumed by the bureaucracy in various ways: thick carpets, large staffs, generous expense accounts, etc.
3. Bureaucracy knows that rue cost of tis programs much better than the elected officials do.

2 key points are that bureaucrats have **incentive to create slack in their programs** and they have **more potential monopoly power than private monopolies.**

5.4.2 Conflicts of Interest and Self-Interest Politicians

- A politicians might take bribes or kickbacks in return for awarding contracts to certain firms rather than to others.

4.4.1 The Benefits Principle

- The benefits principle of taxation states that only the beneficiaries of a particular government program should have to pay for it.

4.4.2 Utilitarianism

- Strict utilitarian position is that an action is good if it increases total utility or happiness. Put slightly differently, utilitarianism is based on the concept that ethical and fair decisions re those that maximize total utility (do whatever produces the great good for the most people).

Flaws:

1. Assume utility is comparable across individuals. How one person gets 40 units if utility from buying a car and another gets 50 units. If this is not possible, the concept of utilitarianism does not work.
2. It favors people who have great capacity for happiness (pleasure machines).
3. Offers very weak protection for individual rights. For example, sacrificing someone for the great good (lifeboat, Mount Everest example).

4.4.3 Rule Utilitarianism

- With this concept a person should NOT ask if it my action increases or lowers total utility. A person should ask would this action raise or lower total utility if everyone acted this way.

4.4.4 Kant's Categorical Imperative

- Categorical imperative = primary duty
- A person considering a particular act should ask the questions, a) is it logically possible for everyone to act in this way, and b) would I want everyone to act in this way
- Acts in accordance with the golden rule which is people should towards others as how they want people to act towards them.

4.4.5 Social Covenants and Contracts

- The social contract approach focuses on setting up appropriate rules to guild entire societies, although such rules certainly have implications for individual behavior.
- It essentially states that we surrender some of our inherent freedoms to the state in order to achieve the protection of the remaining rights and freedoms by the state (in the form of law, order, military, etc). -> yahoo answers

Chapter 10: Natural Resources and Sustainability

10.1 Introduction

Three types of natural resources: renewable resources, nonrenewable resources, and land.

10.2 Management of Renewable Resources

- **Carrying Capacity:** Maximum stock level that can be supported.
- Steady state occurs when the growth rate = harvest rate -> harvest is sustainable

It is often taken to be self-evident that ideal management of a renewable resource implies harvesting at or near maximum sustainable yield, and therefore requires maintain a stock at or close to the size M (highest growth rate/peak of graph).

1. A renewable resource may be uneconomic. Harvesting costs can be high and demand for the resource is low.
2. Secondly, it is also possible that a resource should be fully depleted. If, for example, the current value of the resource product is very high, the harvest cost is low, and the growth rate is low, it might make sense to harvest all of the stock immediately, invest the proceeds, and earn more from the investment that could have been earned by managing the resource on a sustainable basis (what happened to forest stocks in Canada).
3. Cyclical management, whereby the harvest level varies depending on economic conditions, subject to a requirement that the yield be sustainable on average.
4. It is possible that optimal management calls for annual sustainable yield management, in which case there should be a positive harvest equal to, on a year-by-year basis, the growth rate of resource.

One difficulty of resource management is determining a fully optimal harvesting plan in a real situation, because such analysis requires knowledge of the future value of the resource.

Chapter 8: International Trade Policy

8.1 Introduction

Exports have accounted for 30 to 35 percent of Canadian GDP on an annual basis. Most of Canada's trade (close to 60 percent) is with the United States (but diminishing).

8.2 The Basic Economics of International Trade

8.2.1 Comparative Advantage

Comparative Advantage: A country is said to have comparative advantage in the production of X if the opportunity cost of producing more X is lower in that country that it is in other countries. For example, dentists are better off hiring dental hygienist to do cleaning and focusing on patient's teeth's. The dentist has a comparative advantage in sophisticated dental work, and will earn more income by specializing in such work. David Ricardo first described the idea.

8.2.2 Comparative Advantage, Competitive Advantage, and the Exchange Rate

The most obvious way for a firm to improve its competitive advantage is to lower its costs directly by paying lower wages and lower taxes. It would not be good for the country because it would lower living standards.

A firm could also become more competitive by improving its productivity. This might come about through having more productive workers, a more stable and predictable political environment, better infrastructure, or for other reasons. This is the national interest.

8.2.3 Increasing Returns to Scale

International trade may result from increasing returns to scale. Furthermore, the presence of increasing returns to scale expands the gains from trade. For example, countries such as Chile (aircraft) and the automotive industry in Canada and the United States.

8.2.4 Market Structure

If markets are perfectly competitive, then prices equal marginal cost. Therefore, prices will be high if costs are high, and such goods will be imported if they are produced more cheaply abroad.

First, market structure itself influences trade patterns. Second, one consequence of trade is increased competition, because firms different countries are induced to compete with each other.

8.3 Types of Trade Policy

Trade mainly focuses on protecting – restricting or reducing imports.

8.3.1 Import Restricting Polices

Protective policies include the following:

1. **Tariffs:** special tax levied on an imported good or, more rarely, on an exported good. They can be a percentage of the price (ad valorem) or a fixed sum independent of the price. Textiles and clothing are important examples of goods with tariffs.

2. **Quotas:** fixed limits on imports. They are usually implemented using licenses, therefore can be obtained from the government of an importing country. Voluntary export restraint (VER) is a tool to facilitate collusion among exporters.
3. Government procurement policies: For government purchase most governments will give preference to local suppliers.
4. Administrative barriers to trade:
5. Regulatory Barriers: Governments regulate many aspects of economic activity. Such regulations normally focus on a nontrade objective, such as making sure the food supply is safe or that monopoly power is abuse. However, safety regulations can also be used to prevent imports. Sometimes they are legitimate, however, other times there are an excuse to engage in protectionism.

8.4 Normative Reasons for Trade Policy

8.4.1 Overview of Reasons for Intervention

Normative rationales for trade policy include:

1. Raising revenue: Tariffs contribute less than 2 percent of federal government revenue in Canada.
2. Economic criteria for efficiency (steel industry).
3. Exploiting market power in world markets: Brazil can use its market power in coffee by imposing an export tariff on coffee. It would raise the price toward monopoly level, and the government could earn equivalent cartels profits from the tariff revenue. A country who is large enough buyer of a particular product can also use import tariff to take advantage if its market power.
4. The infant industry argument: A country might not, however, be able to achieve its natural comparative advantage, especially if other countries are already well-established in the relevant industries.
5. Profit-sharing: Subsidization of a domestic firm may enhance its competitive position and increase its profits sufficiently for there to be a net gain to the domestic economy, at the expense of rivals (boeing and airbus example)
6. Domestic redistribution: Low income workers in high income countries have been hurt, but economists would argue that if we want to help such people it would make more sense to use other polices, such as reducing their taxes, providing better trading or education, possibly by making transfers to them.
7. Increasing employment?
   Protection for one industry reduces employment:
   - Prices will be higher for the output of the protected industry. This means industries using that output as an input for their production will face higher costs and have lower employment.
   - Employment will be higher in the protected industry. Some of this higher employment will simply be in the form of workers bid away from other industries.
   - Other countries are likely to retaliate, reducing employment in export industries.
   - Even if protection is successful in reducing net imports, there will be adjustments in the exchange rate.
   - Protection will normally have net economic costs, result in a reduction of average living standards. Depressing effect on aggregate economic activity.

Protection can be very effective in redistributing employment among regions or among industries, but it is not likely to increase aggregate employment.

8. Improving the trade balance? Why should having a positive balance be a policy objective? Also, it will decrease imports but also tend to decrease exports. Many more considerations affect the trade balance.

8.5 The Positive Theory of International Trade Policy

- Politicians and individual citizens see that protection can save jobs in any one industry but there is very little recognition that it reduces jobs in others. However, despite such perceptions, the general case for trade liberalization has been increasingly widely accepted over the past few decades and trade barriers in the global economy have fallen significantly.

8.6 The Global Trading system

8.6.1 The General Agreement on Tariffs and Trade

- GATT was developed primarily as an aid to the re-establishment of commercial relations among nations merging from World War II.

8.6.2 The World Trade Organization

- In 1995, the WTO took over GTO. As of 2012 there are 157 member countries and China has also become a full member (2001).

8.6.3 Current Issues in WTO Negotiations

- Most important at present are intellectual property, contingent protection, and the environment.

8.6.4 The International Monetary Fund

- The IMF is the requirement that member countries maintain currency convertibly for current international transactions.

8.6.5 The World Bank

- Provides development funding to governments and private sector participants in a range of countries to promote economic development.

8.6.6 The United Nations

- UN operates, on the one country, one vote principle. It is dominated by the large number of relatively small low-income countries and therefore do not have much significance as the WTO or IMF or World Bank policies.

8.7 Canada-U.S. Trade Relations

8.7.1 The Auto Pact and the Canada-U.S. Free Trade Agreement

- The Auto Pact agreement was the forerunner of a much broader bilateral agreement that extended similar trade liberalization to most of the economy.

8.7.2 NAFTA

- Gradual elimination of a tariffs and quotas on movements of qualified goods between the three countries.