Lecture Notes:

- **Productivity:**
- **Productivity** is a ratio that compares inputs to outputs and factors to products.
- Measures of productivity are ratios.
- **GDP per Capita:**
- A measure of how productive an economy is **GDP per capita**. A country can be productive when it has plentiful, high quality factors of production that are used effectively.
- Real GDP per capita = $\frac{Real\ GDP}{Population}$
- It is a better measure of material well-being than nominal and real GDP.
- A country with a higher GDP and large population might not fare well in this calculation.
- GDP only measures the material well being. GDP only reports total and average productivity but not the distribution of wealth. GDP ignores social and political factors such as human rights, democratic rights, treatment of less-privileged, etc.
- **Why Canada is Productive:**
    1. **Natural resources:**
    - Clean water, fertile soil, oil, gold, natural forests, and preserved eco-systems.
    2. **Labour:**
    - Healthy, well-educated, well-trainedCanadians.
    - Canada has the highest post secondary education participation among OECD countries.
    3. **Capital:**
    - Canada has a good transportation, good communication, and good financial system.
    4. **Entrepreneurship:**
    - The Canadian government supports business initiatives.
    5. **Information/Knowledge:**
    - Canada has good patents, scholarly journals and global research.
- **Labour Productivity:**
- **Labour productivity** is a ratio that divides GDP but by number of hours worked.
- It is a more accurate measure of productivity of workers when on the job.
- Working long hours is not key to prosperity.
- In 2014, the average Canadian worked 1708 hours, roughly the OECD average. Canadians work 25% fewer hours than much poorer Mexicans (2236). Canadians work 20% more hours than much wealthier Norwegians (1403).
- Increasing productivity means doing more with less and is the result of many factors. However, there is no easy or simple formula for increasing productivity.
- **Business Productivity:**
- **Business productivity** is an individual business' measure of outputs to inputs. Inputs are labour, money, and/or materials. Outputs are products or services.
- A higher ratio of outputs to inputs means higher profits.
- Manufacturing: Product/labour hours
- Retailing: Sales/square foot
- Restaurants: Revenue/table or Revenue/store
- Business Productivity = $\frac{Quantity\ or\ value\ of\ goods\ or\ services\ produced}{Quantity\ or\ value\ of\ resources\ used\ to\ produce\ it}$
- Productivity is important because:
    1. People and raw materials cost money.
    2. The more time you spend making a product the more it costs.
    3. The more materials you spend making a product the more it costs.
    4. Operations managers are concerned with the best way to produce things.
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- **Quality:**
- **Quality** is meeting or surpassing the customer's expectations.
- Quality does not mean:
    - Fancy
    - Expensive
    - Lots of features
- Benefits of quality:
    1. Fewer costs
    2. More revenues
- **Fewer Costs:**
- If you give the customer what they want, then there is:
    - no return of product
    - no repairing product
    - less time on customer service
    - less bureaucracy
- **More Revenue:**
- If you give the customer what they want, then they will come back, meaning that you have repeat customers and easy sales.
- If the customer is unhappy with the product and/or the service, then, not only will they demand repairs/refunds, they won't come back and they'll tell all their friends/family/co-workers to not shop there too.
- 90% of unhappy customers don't complain. They just don't go back.
- On average, unhappy customers tell 9 other people about their experience.
- The business will lose a lot of current and potential customers.

Textbook Notes (Chapter 7):

- **Doing More With Less:**
- **Productivity** is a ratio that measures how much gets achieved relative to the inputs that are used to achieve it.
- Productivity measures how much gets done relative to the inputs used to achieve it. By definition, the more we are able to accomplish while using fewer inputs, the more productive we are.
- Another term for productivity is **efficiency**. The two terms are synonymous.
- It is in every business' interest to maximize its productivity or efficiency because resources (inputs) are finite and scarce.
- **Measuring Productivity:**
- Gross Domestic Product per capita is the most widely used measure of a country's wealth relative to that of other countries.
- GDP per capita = Total value of all goods and services in a country/Number of people who live there.
  I.e. GDP per capita = Country's GDP/Country's Population
- **Economic productivity** is a measure of productivity that uses dollar values as the measure of output.
- When comparing productivity between countries, we commonly use US dollars.
- Canadians, with a GDP per capita of $44, 000, are wealthier than the citizens of all but a handful of other countries. Canada's prosperity is due to the fact that we enjoy plentiful supplies of all the factors of production. For example, Canada has the world's 3rd largest supply of fresh water, is the world's 3rd largest producer of aluminum, the world's 5th largest producer of oil and natural gas and the world's 7th largest producer of wheat. Furthermore, Canada enjoys a safe, well-run banking system that can provide capital and Canada has one of the world's best-educated and best-trained workforce.
- **Note:** Prosperity is not the result of working long hours. Working longer hours does not make a country wealthier.
- The Organisation of Economic Cooperation and Development (OECD) is a multinational think tank and research organisation with 34 member countries. It collects and

distributes research and data on wealth creation, economic development and productivity of these countries.The scatter plot below shows as work hours decrease, GDP per capita rises.

- **Labour Productivity:**
- **Labour productivity** is a measure of the productivity of a country's labour force which divides GDP by total number of hours worked.
- The key to prosperity is not working hard, but working smart.
- **Business Productivity:**
- **Business productivity** = $\frac{\textit{Quantity or value of goods or services produced}}{\textit{Quantity or value of resources used to produce it}}$

  It is the measure of how much a business produces relative to labour, capital and other resources used to produce it.
- The higher the ratio of output to inputs, the greater is a business' productivity.
- The most common way to compare productivity across different industries and businesses is to measure economic productivity.
  I.e. To use dollar value as a measure of output.
- In addition, when two competing businesses make the same or very similar goods, productivity can be measured by **physical productivity**. **Physical productivity** is a measure of productivity that uses a numerical quantity as the measure of output. Physical productivity measures the quantity of units produced relative to the inputs.
- Farms can measure their output in bushels per acre.
- Higher productivity gives a company a competitive edge because its costs will be lower.
- **Note:** Each industry is different and the choice of what outputs and inputs to use to measure productivity will vary.
- **What Makes Workers Productive:**
- **Experience curve/Learning curve** is the phenomenon that the more often that a person performs a task, the more adept they become at doing it.
- People build up mastery by repeating a task or activity over and over again.
- Businesses want to hire workers with more experience as the company can be more productive.
- Rather than hiring new workers or building new factories, a business should strive to increase its output by raising the productivity of its existing resources. Businesses can do this through training and coaching their workers as well as investing in tools that can help them finish tasks in less time.
- Increasing productivity means doing more with less.
- Increased productivity is the result of many factors, including:
    1. Having a clear and credible strategy.
    2. Investing in good technology/tools.
    3. Creating motivated employees.
    4. Good human resource management and management in general.
- **Quality:**
- **Quality** is meeting or surpassing the customer's expectations.
- By using resources more effectively, the quantity of output will be greater. While producing more is good, producing it well is better.
- Even if a business can produce high quantity items, if the goods or service does not meet the customer's expectations, they don't want it.
- Quality doesn't mean expensive or fancy. It just has to meet customer's expectations so they are satisfied.
- If a business gives a customer what they want, the customer will most likely continue shopping at that business, generating more revenue for the business.
- On the other hand, if a business does not give a customer what they want, not only will they stop shopping there, they will also tell their friends and family not to shop there, losing revenue and customers for the business.
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- **Quality Management**
- In the decades after World War 2, American consultant W. Edwards Deming tried to convince firms in North America that they need to improve quality as much as quantity. While his ideas were not successful in the US, the Japanese embraced it. Before the 1960s, "Made in Japan" was synonymous with cheaply made goods. However, this changed between 1960 and 1970 where Japanese managers worked to improve quality, reliability, and durability of products. By the 1980s, "Made in Japan" was now synonymous to goods that are well made and dependable.
- The Japanese' reputation for building dependable cars allowed them to take market share away from their US rivals as American cars had developed a reputation for **planned obsolescence**.
- **Planned obsolescence** is a deliberate policy of making a product with an artificially limited useful life so it will soon become obsolete.
- **Total Quality Management (TQM)** is involving everyone in the business to ensure products meet or surpass expectations and that no defects are tolerable.

Textbook Definitions (Chapter 7):

- **Business productivity** = $\frac{\textit{Quantity or value of goods or services produced}}{\textit{Quantity or value of resources used to produce it}}$
  It is the measure of how much a business produces relative to labour, capital and other resources used to produce it.
- **Economic productivity:** A measure of productivity that uses dollar values as the measure of output.
- **Efficiency:** A synonym for productivity. A ratio that measures how much gets achieved relative to the inputs that are used to achieve it.
- **Experience curve/Learning curve:** Phenomenon that the more often that a person performs a task, the more adept they become at doing it.
- **Labour productivity:** A measure of the productivity of a country's labour force which divides GDP by total number of hours worked.
- **Physical productivity:** A measure of productivity that uses a numerical quantity as the measure of output.
- **Planned obsolescence:** A deliberate policy of making a product with an artificially limited useful life so it will soon become obsolete.
- **Productivity:** A ratio that measures how much gets achieved relative to the inputs that are used to achieve it.
- **Quality:** Meeting or surpassing the customer's expectations.
- **Total Quality Management (TQM):** Involving everyone in the business to ensure products meet or surpass expectations and that no defects are tolerable.