4.1. Introduction

This chapter covers one major components of learning objectives/outcomes that are likely to examine via coursework or examination. This chapter will enable students to build their knowledge on external influences on international business, such as the political, economic, technological and legal frameworks.

This chapter will cover the following topics:

- Political environment
- Political risk
- The international legal environment
- Intellectual property rights
- Economic systems
- Economic variables and the business environment
- Technological environment
- Technology transfer

4.2. Political Environment

Proactive international firms maintain an up-to-date profile of the political and economic environment of the countries in which they maintain operations (or have plans for future investment).

As the heart of governance is the notion of ‘sovereignty’, which implies the power to rule without constraints and which, for the last three centuries, has been associated with the nation state.

Therefore it is useful to highlight some opposing and arguably contradictory tendencies in globalisation.

- Centralisation versus decentralisation. Some aspects of globalisation tend to concentrate power, knowledge, information, wealth and decision making. Many believe this to be the case with the rise of MNE, the growth of regional trading blocs (EU), the development of world regulatory bodies such as the WTO etc. However such centralising tendencies may conflict with powerful decentralising tendencies as nations, communities, individuals attempt to take control over the forces that influences their lives.

- Juxtaposition versus syncretisation. In the globalisation process, time and space become compressed, so that different civilisations, ways of life and social practices become juxtaposed. This creates ‘shared’ cultural and social spaces characterised by an evolving mixture of ideas, knowledge and institutions. Unfortunately this can also stimulate the opposite tendencies, such as heighten the awareness of challenges to the established norms of previously dominated groups.
4.3. Political Risk

Political risk refers to the “threat that social, political or economic factors in a foreign country may affect the feasibility and profitability of an organization’s global operations”. Political risks can be classified into two broad categories, ‘macro political’ and ‘micro political’

Therefore political risk can be considered to arise at the macro or micro level.

**Macro Political Risk**
- Macro-political risks will affect all foreign firms in the same general way.
- For example, expropriation, the seizure of private businesses with little or no compensation to the owners as indigenisation laws which require that national citizens hold a majority share in all enterprises.

**Example:**
When the new British-controlled regime in Iran came into power, the Rockefeller-influenced U.S. government immediately threatened to seize $7.9 billion of Iranian assets located in the U.S (Livergood, undated).

In 2001, Iraq war caused to increased price of oil and severely affected airline industry. For example Air Canada has filed for bankruptcy and is cutting 3,600 jobs from its 40,000 workforce and United Airlines in February the company lost $367m - amounting to $13m a day.

**Micro Political Risk**
- Micro-political risk tends to affect selected sectors of the economy or specific foreign companies and is often driven by the dominance of those firms.
- These risks often take the form of industry regulation, taxes on specific types of business activity and local content laws.

**Example:**
In Malaysia, 2005, implemented a law stating that 80% of the components used in manufacturing car must be from Malaysian suppliers.

In Maldives, 2007, change the foreign labour regulation indicating that all foreign labours such as drivers, waiters, divers must be replaced by local Maldivians by the end of 2007.
4.3.1. Analysing Political Risk

(Rugman & Hodgetts)

<table>
<thead>
<tr>
<th>Sources of Political Risk</th>
<th>Groups that can generate Political Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Political philosophies that are changing or are in competition with each other,</td>
<td>Current government and its various departments and agencies;</td>
</tr>
<tr>
<td>• Changing economic conditions,</td>
<td>Opposition groups in the government that are not in power but have political influence;</td>
</tr>
<tr>
<td>• Social unrest,</td>
<td>Organised interest groups such as teachers, students, workers, retired persons, etc;</td>
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<tr>
<td>• Armed conflict or terrorism,</td>
<td>Terrorist or anarchist groups operating in the country;</td>
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<td>• Rising nationalism,</td>
<td>International organisations such as the World Bank or United Nations;</td>
</tr>
<tr>
<td>• Impending or recent political independence,</td>
<td>Foreign governments that have entered into international alliances with the country or that are supporting the opposition within the country.</td>
</tr>
<tr>
<td>• Vested interests of local business people,</td>
<td></td>
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<tr>
<td>• Competing religious groups,</td>
<td></td>
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<tr>
<td>• Newly created international alliances</td>
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</tbody>
</table>

The likely impacts of political risk

<table>
<thead>
<tr>
<th>Type of political risk</th>
<th>Impact on MNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expropriation/confiscation</td>
<td>Loss of sales</td>
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<tr>
<td></td>
<td>Loss of assets</td>
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<td></td>
<td>Loss of future profits</td>
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<tr>
<td>Campaign against foreign goods</td>
<td>Loss of sales</td>
</tr>
<tr>
<td></td>
<td>Increased costs of public relations campaigns to improve public image</td>
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<tr>
<td>Mandatory labour benefit legislation</td>
<td>Increased operating costs</td>
</tr>
<tr>
<td>Kidnappings, terrorist threats and other forms of violence</td>
<td>Disrupted production</td>
</tr>
<tr>
<td></td>
<td>Increased security costs</td>
</tr>
<tr>
<td></td>
<td>Increased managerial costs</td>
</tr>
<tr>
<td></td>
<td>Lower productivity</td>
</tr>
<tr>
<td>Civil wars</td>
<td>Destruction of property</td>
</tr>
<tr>
<td></td>
<td>Lost sales</td>
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<tr>
<td></td>
<td>Disruption of production</td>
</tr>
<tr>
<td></td>
<td>Increased security costs</td>
</tr>
<tr>
<td></td>
<td>Lower productivity</td>
</tr>
<tr>
<td>Currency devaluation</td>
<td>Reduced value of repatriated earnings</td>
</tr>
<tr>
<td>Currency revaluation</td>
<td>Less competitive in overseas markets and in competing against imports in home market</td>
</tr>
<tr>
<td>Increased taxations</td>
<td>Lower after-tax profits</td>
</tr>
</tbody>
</table>
4.3.2. Quantifying Political Risk

There are more sophisticated ways of analysing political risk, of which one is to identify and then quantify the various elements involved.

It is not only the probability of a particular political risk factor occurring but the magnitude of its potential impact on the objectives of the company that must also be taken into account.

Once, identified and assessed, any political risks can be prioritised, as in figure 4.1.

![Figure 4.1: Prioritising (political) risk](Source: Wall et al (2010, p.137)]

4.3.3. Responses to political risks

Once the risk has been analysed and assessed, organisation must decide if there are ways in which such risks can be managed. There are two common responses:

1. Improve relative bargaining power
2. Adopt integrative, protective and defensive techniques

Relative bargaining power:

In an attempt to overcome political risk, some MNEs may seek to develop a stronger bargaining position than that of the host country itself. For example, the MNE might attempt to create a situation in which the host country loses more than it gains by taking actions against the company. This could be the case when the MNE has proprietary technology that will be lost to the host country if the company is forced to meet certain governmental regulations or where the MNE can credibly threaten to move elsewhere (with significant job losses) to avoid such regulations.

Integrative, protective or defensive technique

A second approach is to use of techniques to prevent the host government interfering with the operations of MNE.
• **Integrative techniques** ensure that the subsidiary is as fully integrated as possible with the local economy, so that it becomes part of the host country’s infrastructure. Techniques may here include:
  
  o Developing a good relations with the host government and other local political groups
  o Producing as much of the product locally as is possible.
  o Creating joint-ventures and hiring local people to manage and run the operations
  o Carrying out extensive local research and development
  o Developing good employee relations with local labour force

These techniques raise the ‘costs’ to the host country economy of unwelcome interference in MNE activities.

• **Proactive and defensive techniques** seek to limit, in advance, the ‘costs’ to the MNE should the host government interfere in its activities. Such techniques may include doing as little local manufacturing as possible, locating all research and development outside the country, hiring only those local personnel who are essential, manufacturing the same product in many other different countries, etc.


1. **External drivers** of political risk involve factors whose probability cannot be influenced by the firm. Examples include political instability (riots, civil wars, coups) and weak public policy (hyper inflation, currency crisis).

2. **Interaction drivers** of political risk involve factors that are broadly related to company relationships. Examples include relationship with home country and host country governments, regional and local authorities and national and super national institutions and regulatory bodies, pressure groups, local communities etc. For example, given the importance of guanxi-type relationships to business activities in Confucian societies, politically ‘risk averse’ firm operating in China or Hong Kong might invest substantial resources in fostering such relationship.

3. **Internal drivers** of political risk involve factors which are specific to the organization and operation of the company itself. Examples might include the extent to which internal incentives structures are aligned with corporate objectives. An executive remuneration scheme which link bonuses to turnover or market share may be
less appropriate where the corporate objective is primarily profit related.

4.4. **The international legal environment**

The legal system refers to the unique systems of regulations, laws and rules that affect the choices made by individuals in any society and that govern the ways these individuals are responsible for their decisions and actions. For the MNC, of more importance is the international business law system representing the law and rules of any nation that affect the types of business decisions made in that country.

4.4.1. **Types of legal system**

Different types of legal system can be divided into the following categories:

- **Common Law**: which is practiced in Great Britain and its former colonies, for example, the United States, is more susceptible to challenge, change, and amendment. The common law system is based not on federal administration but on judicial interpretation of the law as well as on customs or usages existing within the nation. Under common law, decisions made by the court are based on preceding judicial judgments rendered by prior courts.

- **Statutory law**: Common law countries depend not only on case law but also on statutory law (legislation) the law passed by the government. This can also be a source of legal variation between countries. For example, the US Freedom of information Act is more far reaching than similar UK legislation, so that transactions between the government and companies have to be more transparent in the USA than in UK.

- **Code law**: This is the world’s most common system. It is explicit codification in written terms of what is and what is not permissible. Such laws can be written down in criminal, civil and commercial codes, which are then used to determine the outcome of all legal matters.

- **Religious law** This law is based on the officially established rules governing the faith and practice of a particular religion. A country that applies religious law to civil and criminal conduct is called a theocracy. In Iran, for example, a group of mullahs, or holy men, determine the legal it or illegal it through their interpretation of the Koran, the holy book of Islam. Religious laws can create interesting problems for firms. Consider the teaching of the Muslim holy book, the Koran, which denounces charging interest on loans as an unfair exploitation of the poor. Muslim firms and financial institutions have had to develop alternative financing arrangements to acquire and finance capital. Muslim businesses
often rely on leasing arrangements, rather than borrowing money, to obtain long-term assets.

- **Bureaucratic law:** which is practiced in many communist countries as well as dictatorships, is law that is set by the country’s current leadership. This law is subject to change rapidly, when regimes change. In the summer of 2003, the citizens of Hong Kong feared that the Chinese government would impose an antisubversion law on the island, as is in place on the mainland. This law, which could be used to quell future protests in Hong Kong, contradicted the concept of “one nation, two systems” that has existed between China and Hong Kong since China took over possession of the island from Great Britain in 1997. While the Chinese government eventually backed off on its implementation of an antisubversion law in Hong Kong, this is an example of how bureaucratic law can suddenly change the operating environment in a formerly open society. MNEs operating in such countries have often found it difficult to manage their affairs as there tend to be a lack of consistency, predictability and appeals procedure.

### 4.4.2. Effects of national laws on international business

National laws affect international business in a variety of ways.

1. There are may be legal rules relating specific aspects of business operations such as off-shore investment, the environment, ways in which financial accounts are prepared and disclosed, corporate taxation, employee rights and pension provisions. There may even be legal rules as to the amount of assets and shares companies may own and the proportion of profits are allowed to remit back to their home country.

2. National laws may also affect aspects of the company’s internal organisation such as its human resource management and health & safety policies. These might include factors such as provision of maternity and paternity leave, payment of a statutory minimum wage, physical working conditions, protection of employees against hazards at work and pollution, pension and medical provisions and childcare facilities.

3. These rules and regulations may reflect the national government’s trade and industrial policies. Some government positively encourages inward investment while others may create a whole web of red tap bureaucracy, which may take months or even years to unravel.

Therefore MNE should be aware of national regulation in the following areas:
- Trade restriction
- Foreign ownership restriction
- Environmental restriction
- Exit restriction
4.4.3. Effects of supranational regulations on international business

MNEs must pay attention to the regulation imposed by these bodies when devising corporate policy. For example when companies are offered governmental inducements to retain or initiate production facilities in particular countries within EU, they must ensure these inducements are compatible with EU directives on state aid. Otherwise, the aid inducements will be vetoed by the EU, and both the MNE and host country’s policies will be disrupted.

4.4.4. Settling international disputes

Cross boarder activities of MNEs can create problems in settling international disputes. At least four issues are often involved.

1. Which country’s law applies to disputes?
2. In which country should the issue be resolved?
3. What techniques should be used to resolve the conflict-litigation, arbitration, mediation or negotiation?
4. How will the settlement be enforced/

Process to resolve the disputes:

- Litigation
- Arbitration or mediation
- Governmental disputes
- Negotiation

4.5. Intellectual Property Rights

Intellectual property rights include

Patents
Trademarks
Copyrights

4.5.1. Patents

Patents are rights granted by governments to the inventors of products or processes for exclusive manufacturing, production, sale, and use of those products or processes. Patents are the equivalent of the legal ceding of monopolistic power over the subject matter of the patent. They are intended to stimulate the creation of new technology and inventions by providing creators with assurances of gain from the potential benefit from their endeavors. Patents protect the subject from infringement of rights only in the country in which they are registered. Consequently, a multinational firm marketing its products or processes in a number of countries must make sure that its patents are protected in all existing as well as potential market areas.
4.5.2. Trademarks

Trademarks and trade names are designs, logos, and names used by manufacturers to differentiate and identify their goods with customers.

Trademarks are considered an integral part of the total product, which is the entire image and package surrounding the product being marketed. Trademarks and trade names have an indefinite life and can be licensed to others, as long as they retain their brand distinction and do not pass into generic descriptive use, as happened, for example, with aspirin.

Goods that use false trademarks are counterfeit products, and producers and sellers of such goods are subject to prosecution under trademark laws of individual countries. Trademarks are generally not considered infringed on when they are imitated (“knocked off”), as long as they are not characterized as the original merchandise.

The inappropriate use of trade names and trademarks creates legal conflicts around the world. Recently, Rap star Missy Elliott’s clothing line ran into trouble in Denmark. The logo on the clothes was too similar to that of the country’s queen. The shoes, bags, and shirts in the collection carry a logo that consists of a crown on the top of the word “re-spect,” and Missy Elliott’s initials, “M.E.” Queen Margrethe II’s logo consists of a crown on top of the characters “M-2-R,” with the “R” standing for the Latin word for queen (regina). Clothing maker Adidas-Salomon AG was forced to withdraw the line from Danish stores after the royal court said that the logo infringed on the queen’s copyright. Even though copyright laws are global, Adidas does not plan to remove the collection from store shelves outside Denmark.

4.5.3. Copyrights

Copyrights give exclusive rights to authors, composers, singers, musicians, and artists to publish, dispose of, or release their work as they see fit. The people in the music business face problems with the illegal use of their material—piracy, which is the unlawful duplication of copyrighted material including sound recordings to make bootleg tapes and records. A major area in which copyrights are routinely infringed is computer software.

Many developing countries are known to illegally copy computer software and sell it at reduced prices in the local markets.

Copyright protection is divided into two categories: that which protects the right of a creator to economic benefits or returns from his or her work and that which protects the creator’s moral right to claim title to the work and to prevent its being altered without consent or published without permission.
4.5.4. Trade related aspects of intellectual property rights (TRIPS)

The purpose of TRIPS is to allow for the creation of domestic laws that concern the protection of intellectual property rights, as well as the enforcement of such laws in violating countries. TRIPS established minimum levels of protection that each WTO member government must provide to the intellectual property of fellow WTO member states. TRIPS covers the following types of intellectual property:

- Copyrights
- Trademarks (including service marks)
- Geographical indications: such as “Champagne,” “Scotch,” and “Tequila”
- Industrial designs
- Patents
- Layout designs of integrated circuits
- Undisclosed information, including trade secrets

TRIPS provides guidelines for how basic principles of the trading system and other international intellectual property rights agreements should be applied. It also spells out how various WTO member governments must provide adequate protection of intellectual property rights in their domestic laws, and sets rules for how countries should enforce intellectual property rights within their own borders. TRIPS also provide a means of settling disputes regarding intellectual property between members of the WTO.

4.6. The Economic Systems

There are mainly three types of economic systems. These include:

Command economies
Free-market economies
Mixed economies

4.6.1. Command economies

Some features of command economies are:

- Governments, not markets, allocate scarce resources of land, labour and capital.
- Comprehensive plans are drawn up to decide which products are to be produced and in what quantities.
- Prices, if they exist, are determined by governments. If there is excess demand at the ruling price, then ‘rationing’ may be used. If there is excess supply, then unwanted product may simply be stored or even destroyed.
- Governments retain ownership of the means of production (little or no private ownership).
• Advantages – production and consumption can be based on ‘social’ rather than ‘private’ needs and wants.
• Disadvantages – expensive bureaucracy needed to allocate resources; inappropriate decisions often made by bureaucrats, resulting in excess supply for unwanted products or excess demand for wanted products.

4.6.2. Free-market economies

• Markets alone are used to allocate scarce resources of land, labour and capital.
• Prices (determined on markets) act as ‘signals’ to producers and consumers, bringing supply and demand into balance (equilibrium).
• No direct role for governments in resource allocation – their main task is to provide the infrastructure needed to allow markets to work (e.g. law and order, defence etc.).
• Advantages – markets co-ordinate (via price) the activities of millions of buyers and sellers without any need for an expensive bureaucracy of decision makers.
• Disadvantages – ‘market failures’ can result in a misallocation of resources.

4.6.3. Mixed economies

• Uses both markets and government intervention to allocate scarce resources of land, labour and capital.
• Government intervention can be direct (e.g. nationalised industries, public sector services) and or indirect (e.g. regulations, tax policies).
• Most modern economies are mixed – e.g. around 40% of UK expenditure and output involves the public sector.
• Advantages – government intervention can help offset various types of ‘market failure’ markets and prices can be used to co-ordinate large numbers of independent decisions.

4.7. Economic variables and business environment

Number of key economic variables will shape the environment in which such business is conducted. Managers of international businesses (IB) must take into account many factors (economic indicators) in order to assess opportunities and threats. Some of the key economic variables/indicators are:

Real income per head
Economic growth or recessions
Exchange rate
Inflation
Taxes and subsidies
4.7.1. Real income per head

The gross national product (GNP) is widely used measure of economic well-being, reflecting the total value of output (or income) attributed to nationals of that country in a given year.

To serve as a measure of the standard of living this is often expressed ‘per head of population’ and ‘real terms’ (excluding inflation).

Per capita GNP varies greatly from country to country. Industrialized countries that have a high gross national product and relatively small populations tend to have a high per capita GNP. On the other hand, less-developed countries have a low GNP but relatively larger populations, which results in a very low per capita GNP.

The World Bank has formulated four categories of countries based on their per capita GNP:

- **Low-income countries**, with a per capita GNP of US$935 or less
- **Lower-middle-income** developing countries, with a per capita GNP between US$936 to US$3704,
- **Upper-middle-income countries**, with a per capita GNP between US$3705 and US$11,455
- **Developed countries**, with a per capita GNP exceeding US$11,456 or more

Countries with a low per capita GNP would not have a very large potential as a market for such goods as automobiles and air conditioners, which are considered necessities in developed countries but are luxuries in developing countries. On the other hand, countries with a low per capita income are likely to have lower labour costs and could prove attractive to MNEs as sites for manufacturing facilities.

4.7.2. Economic growth or recessions

This is often expressed in terms of the percentage change in real national incomes per head and can be a key indicator for the future business prospects. For example, where a business is trading in products which have a high income elasticity of demand, such as air travel, then prospective changes in economic growth rates can have major influence on projected future profitability.
**Income elasticity of demand (ICD)**

This measures the responsiveness of demand for a product to changes in the real income of consumers.

\[
\text{IED} = \frac{\% \text{ change in quantity demanded of } X}{\% \text{ change in income}}
\]

IED involves shifts in a demand curve (increase/decrease) rather than movements along a demand curve (expansion/contraction).

![Figure 4.2: Economic conditions and demand](image)

Source: Griffiths & Wall (2005, p.6).

For a normal product the sign of IED will be positive: for example, a rise in income increases demand for X, i.e. a rightward shift in Dx, with more of X demanded at any given price.

For an inferior product the sign will be negative over certain ranges of income: for example, a rise in income beyond a certain ‘threshold’ level may decrease demand for X as consumers use some of the higher income to switch away from the relatively cheap but poor-quality product X to a more expensive, better-quality substitute.

As a broad rule of thumb, some people regard income elasticity of demand as useful in classifying products into ‘luxury’ and ‘necessity’ groupings. A product is often considered a luxury if IED is > 1 and a necessity if IED is significantly <1.
Price elasticity of demand (PED)

Price elasticity of demand (PED) is a measure of the responsiveness of demand for a product to a change in its own price. PED assumes that as the price of X changes, other things (the conditions of demand) remain equal, so it involves movements along the demand curve (expansion/contraction) rather than shifts in the demand curve (increase/decrease).

The PED for product X is given by the equation:

\[
PED = \frac{\text{% change in quantity demanded of X}}{\text{% change in price of X}}
\]

Strictly speaking, the sign of PED for a product is negative, since a fall in price of X will lead to an expansion of demand for X. For example, if a 2% fall in price of X results in a 6% expansion in demand, then PED is +6/-2 = +0.3. However, we usually ignore the sign of PED when expressing the numerical values. Therefore we can conclude that:

PED>1 (relatively elastic demand): fall in price raises total revenue; rise in price reduces total revenue.

PED<1 (relatively inelastic demand): fall in price reduces total revenue, rise in price increases total revenue.

Cross elasticity of demand (CED)

CED is a measure of the responsiveness of demand for a product (X) to a change in price of some other product (Y). It involves shifts in a demand curve (increase decrease) for X rather than movements along a demand curve (expansion contraction).

The CED for product X is given by the equation:

\[
CED = \frac{\text{% change in quantity demanded of X}}{\text{% change in the price of Y}}
\]

The sign of CED will indicate the direction of the shift in demand for X (Dx) in response to a change in the price of Y (Py), which in turn will depend upon the relationship in consumption between products X and Y.

Where X and Y are substitutes in consumption, a fall in Py will result in an expansion of demand for Y and a decrease in demand for X, i.e. a leftward shift in Dx as some consumers switch to the now relatively cheaper substitute for X. Here the sign of CED will be positive (-/-=+).
Where X and Y are complements in consumption, a fall in Py will result in an expansion of demand for Y and an increase in demand for X, i.e. a rightward shift in Dx as consumers require more of X to complement their extra purchases of Y. Here the sign of CED will be negative (+/-=-).

The magnitude of the shift in Dx will depend upon how close X and Y are as substitutes or complements in consumption. The closer the two products are as substitutes or complements, the greater will be the numerical value of cross-elasticity of demand. In other words, a given fall in price of Y will cause a larger shift to the left of Dx for close substitutes, and a larger shift to the right of Dx for close complements.

4.7.3. Exchange rate

International business must clearly take into account actual and prospective changes in relative exchange rates when evaluating the economic environment in which they are doing business.

When comparing the standard of living (GNP per head) between different countries it is usual to use a common currency such as US$ in the World Bank classification. Even this may be misleading, since converting the value of the GNP expressed in the local currency into equivalent using official exchange rate may misrepresent the actual purchasing power in the local economy.

Exchange rate can be crucial in determining the export and imports. For example, a fall in exchange rate will make exports cheaper overseas and imports dearer at home, encouraging consumers in overseas markets to switch from domestic to the now relatively cheaper foreign products and consumers in the home markets to switch from the relatively more expensive foreign products to domestic products. The opposite effects can be expected from rise in exchange rate, exports becoming relatively more expensive and imports relatively cheaper.

4.7.4. Inflation

Inflation is a persistent tendency for the general level of prices to rise. A modest rate of inflation is often regarded as ‘favourable’ by business as in such economic environment any extra costs can more readily be passed on to consumers in the form of higher prices.

Excessive rates of inflation can result in instability and rapid increase in costs, often followed by deflationary macroeconomics measures by government resulting in sharp decreases in consumer demand.

For cost oriented multinational, locations with low and stable rates of inflation might prove more attractive in terms of foreign direct investments.
4.7.5. Taxes and subsidies

Variation in national tax rates and allowances and in the provision of grants and subsidies can have a major influence on international business decisions. These can obviously include decisions as to where to locate particular elements of globalised production processes. They might also include decisions involving transfer pricing of internal transactions within the multinational enterprises.

4.8. Technological environment

Technological change can have an impact on the decisions taken by international business. Technological change can involve:

*New process of production:* new ways of doing things which rises productivity of factor inputs, as with the use of robotics in car assembly techniques which has dramatically raised output per assembly line worker. For example, around 80% of technological change has been process innovation.

*New products:* For example, online banking and many new financial services are a direct result of advances in microprocessor-based technologies.

4.8.1. Technology and employment

New technologies can both create and destroy jobs. Where the new technologies involve process innovation then labour is often replaced by capital equipment in the production process and the term ‘technological unemployment’ is often used. For example, the US Internet banking company has introduced ‘smart’ technologies into every aspect of its operations, so that its $2.4bn of deposits are now managed by just 180 people, compared to the 2,000 people required to manage deposits of this size in less technologically advanced banks.

However, the new technologies may lower product prices and raise product quality, thereby increasing product demand and creating new jobs, even if these are different from the original jobs displaced.

Technological unemployment may, however, be about to enter a new phase! Rifkin (2004) reports that new technologies are increasing productivity at ever-accelerating rates in both industrial and service sectors, so much so that job destruction is outweighing job creation.

4.8.2. Technology and competitive advantage

Technological change provides national and international business with both opportunities and threats. For example, five new broadband wavelengths were auctioned in the UK in early 2000. Access to such wavelengths has been regarded as vital for the new generation of wireless application protocol
(WAP) products, making possible the internet, television and other interactive application on the third-generation of mobile phones.

The impact of technical change on competitive advantages is also considered. For example new technologies in manufacturing of semi-conductors have had a major impact on that industry. The monster chip fabrication plants, or Fabs, can produce more than US$8 billion of chips a year, more than several medium-sized producers combined, around 5% of global capacity.

### 4.9. Technology Transfer

It is widely held that multinational activity is more efficient foreign multinationals promotes technology transfer to the benefit of domestic companies. For example, when Nissan established a car plant in Northern –Eastern England, it demanded much of higher standards of UK components suppliers than the incumbent national producer such as Ford and Rover.

There are some limitation in technology transfer: for example in case of inward FDI may reflect multinationals seeking to exploit an ownership-specific advantage over domestic companies. In such circumstances, it is unlikely that foreign multinationals will willingly share the technologically based sources of its competitive advantage over local rivals.

A further obstacle to technology transfer may involve the issue of cultural dissonance. The psychic distance between US and UK companies is relatively small. Both shares a broadly common culture, a common language and they have a reasonably high level of mutual understanding. However success of multinationals from (Japan) or other parts of east and south-east Asia is built on a very different setting.

An opposing view point to the potential damage to the host country’s of technology transfer when it enables foreign affiliates to dominate domestic markets and displace domestic producers.

#### 4.9.1. Types of technology transfer

*Internationalised transfer:* This takes the form of direct investment by a parent company in its foreign affiliates. Such intra-firm technology transfer may be difficult to measure.

*Externalised transfer:* This can take a variety of forms such as: licenses, franchises, minority joint ventures, subcontracting, and technical assistance, purchase of advanced equipment and so on.

According to Wall et al (2010), the following factors are widely regarded as increasing the probability of an MNE resorting to ‘internalised transfer’:
- The more complex and fast moving the technology
- The larger and more transnational the company
- The more internationally experienced and more technologically specialised the parent company and its affiliates.
- The fewer obstacles placed in the way of FDI by host governments and the more inducements offered.
- The greater the focus of the parent company on utilising advanced technology as rapidly as possible without waiting for the host country domestic to develop technological capabilities.

4.9.2. Benefits of internalized transfer to host country

It gives host country firms access to new, up to date and more productive technologies, which are unlikely to be available by any other means.

Other benefit often follow from access to such technologies, as in the case of the host economy being used by the parent company as a production platform for an exported oriented policy region.

The host country may also gain access to expensive brand images which further aid overseas sales as well as to substantial financial and other resources owned by the parent company.

New operation management and other logistical techniques may be learned by the host country workers, with the general skill base of local labour being raised by exposure to more advanced operations and in-house training methods.

4.9.3. Costs of internal transfer to host country

Local firms may be disadvantaged by being dominated in their home and export market by the production affiliates of overseas parent company. This may reduce overall employment and income in the home economy.

Parent company may share little of tacit or explicit technological, organizational or operational knowledge with the local affiliates, thereby doing little to raise the skill and knowledge base of the local economy (host country).
Reference list


