EXAMINATION

Faculty:	**School of Economics and Business**	
Examination in:	ECN330 *Course code*	Trade Liberalization and Economic Integration *Course title*
Time for exam:	07.12.202x *Date*	14.00 – 17.00 (3 hours) . *As from – to and duration of exam (hours)*
Course responsible:	Roberto J. Garcia *Name*	

Examination aids: A1. No calculator is necessary; no other aids permitted.

The exam includes: 3 pages including this exam instruction page
Number of pages, including attachments

Instructions:

Please keep answers to Part 1 separate from answers to Parts 2 and 3, and answers to Part 2 separate from those to Part 3. Avoid unnecessary information as this will negatively affect the quality and value of your answer. Graphs are required only when specifically asked for, but you can use graphs whenever you think it helps your answer. Be sure to label graphs, be neat, make all assumptions explicit and explain.

Examination format: On campus exam, letter grade, A-F; 100 points total

Part 1: (25 points) true, false, depends format, 5 statements, each worth 5 points.

A brief explanation is required (no more than three sentences) to explain why the statement is either true, false, or whether it depends. Defend your answer in all cases.

Part 2: (45 points) medium-length answer format, 3 questions, each worth 15 points.

Provide short answers to the questions or statements. You may use a graph in your answer but be sure to explain the graph if you choose to illustrate your point in that way. Each problem is divided into two sub-parts. If asked for a *list*, a few bullet points related to the concept(s) is what is required.

Part 3: (30 points) trade modelling scenario and detailed supporting answers.

The question involves modelling a specific policy situation and trade policy analysis. You are instructed to provide a graph(s). Be sure to provide an explanation and any supporting assumptions that clarify what you are demonstrating in the graphs.

Solutions to previous ECN330 exams: 2021-25

Solutions Exam 2023 and results: 3B, 4C, 1F; mean of passing grades = 73,3 C

Part 1. Explain whether each statement is true, false, or whether it depends. If depends is your answer, be sure to explain upon what it depends. (25 points)

1.1 Arguably a tariff on imports can be applied to meet a wide range of policy objectives. However, a subsidy would be better than anything a tariff is intended to achieve.

D. Focus on the objective(s): TOT, revenue, support/protection, response to "unfairness", or for some other social policy objective). Subsidies are a more targeted policy instrument and therefore are more appropriate to achieve some economic objective such as a supporting some level of production or some level of income. However, if a tariff is a response to a "unfair" trade situation such as an export subsidy then a policy response that limits imports by taxing the subsidized good might be a more appropriate instrument. If the intent is tax collection, then a tariff is preferred to a subsidy (even though a domestic tax is a preferred method of revenue collection).

1.2 In a market situation where the home country is a net importer with a domestic monopoly, an import quota is not equivalent to tariff because the quota gives the domestic firm greater control over the market.

T. The presence of a domestic monopoly is a case in which the equivalence of a tariff and quota comes into question. If a domestic monopoly is allowed to operate as a sole supplier on the domestic market and has control over imports, then the monopolist can abuse its market power without the need for trade policy protection. If control over imports is not assured to the firm, then tariff protection will not generally give the firm the ability to exercise market power. There is an interplay between trade policy and competition, but also a quota allows more room for a monopoly to exercise mkt power. A tariff would not, in general, give a domestic monopoly enough protection to abuse its mkt power. This assumes that the quota-tariff comparison is of binding policy constraints.

1.3 A regulation restricting the total number of service providers that are allowed to compete on the domestic market would be a violation of WTO rules.

F/D. There is nothing in the WTO rules that states that a country does not have the right to regulate how many service providers there can be or even how many foreign suppliers have the right to supply the domestic market. Also, there is no requirement for a service sector to be made commercially competitive. Services are governed by dom regs and are not treated as trade policy, even if the dom reg affects trade (or provision of services by a foreigner). What the rules do say is that once dom regs are "scheduled" the restriction on services provision should not become greater over time.

1.4 Several countries have considered introducing "plain packaging" regulations for cigarettes to make the product less appealing to consumers. A trade dispute related to such regulation would involve both the WTO Agreements on Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT).

T/D. The regulation involves a packaging requirement which is a technical barrier, but if the intention of the policy is to make the product less appealing because of the health consequences of the product then it also has an SPS component to it. If a regulation aims at animal, plant, and human health or the environment, even if a TBT issue is involved, a dispute related to the regulation would be considered under SPS agreement. Rather than a ban on the product, the intent of the reg is to affect consumption of the good regardless of origin. The debate would involve whether the SPS nature of this case would permit the technical requirement to stand.

1.5 WTO rules allow governments to take trade policy action when import volumes or values enter the domestic market and cause “injury”. However, an important distinction between the application of safeguard measures and countervailing measures is when unfair trade practices are concerned.

T. Safeguards measures are the imposition of temporary import restrictions above MA bound rates in response to situations where imports surge creating or threatening injury to the domestic industry affected. This is not the result of an “unfair” trade advantage. A countervailing measure is a tariff in response to an “unfair” subsidy. That would be an export subsidy, which are now illegal for agricultural goods since 2020, and a domestic support program above the bound AMS level for agriculture, or a subsidy that was not considered green light for an industrial good. These would be considered “actionable” subsidies, allowing a country to apply a CVM if the subsidy was not removed.

Part 2. Briefly answer the following questions or respond to the specific statements. Relate your answers to concepts discussed in class and avoid unnecessary information. (45 points)

2.1 Suppose that patent protection is extended to a firm for a new product its research and development (R&D) group invented. Think about the trade implications of the patent protection before and after the protection when answering the following:

2.1.1 Economic theory justifies patent protection for R&D, but what is the policy dilemma for providing such protection in terms of its potential economic implications? (10 pts)

The policy dilemma is that there are dueling market failures. With or without IP protection there can be a problem with market failure, an externality, or imperfect competition. If the IP protection is a patent, then it would grant the patent holder monopoly status if even temporarily (i.e., 20 years). Granting a firm monopoly power over a good, means the firm can set monopoly prices and limit access to the good for poorer consumers/countries. Failure to provide such IP protection can result in too little R&D activity and too little innovation for future prodvty growth or creation of new products. However, even if the R&D could lead to a new product(s), the absence of protection of IP can mean that rival firms could copy the innovation, and the inventing firm would be unable to recover the cost of the innovation preventing it from receiving sufficient compensation for the cost of the R&D. Thus, if a proper return could not be gotten for non-physical assets such as R&D, then there would be too little R&D activity. If R&D activity is K-intensive and knowledge intensive, then the returns to IP will disproportionately go to the richer countries with developing countries being subjected to monopoly pricing.

2.1.2 What is the justification for intellectual property protection to be included as a multilateral rule under the WTO? Be specific. (5 pts)

IP rules are set at WIPO not WTO. WTO is concerned with trade issues. IP protection is included as a multilateral rule under the WTO because of the trade and investment distorting effect that could come about from the absence of such protection. Foreign rival firms can pirate/copy the IP and compete against the genuine product. Inventors and creators will not be able to get a proper return because the good is rival in production and consumption, meaning investment will occur where it is cheaper to produce (where licensing is not required) and sold in markets alongside the genuine product. If pirated CDs are produced, then production of the genuine good will suffer (production/investment distortion). If pirated CDs are sold/bought, then the pirated version competes with the genuine good (trade/consumption distortion).

2.2 Think about how WTO rules treat subsidies and investment measures when applied to trade in goods. The WTO rules provide a legal definition of a subsidy and specify which type of subsidy is allowable. WTO rules also specify how trade in goods and investment measures might relate. Keep in mind these concepts and why the WTO rules are what they are when answering the following:

2.2.1 WTO rules on subsidies specify allowable and prohibited subsidies. How do WTO rules do this? In your explanation, carefully discuss what you think the difference is between a "good" subsidy versus a "bad" subsidy. (10 pts)

The WTO definition of a subsidy is that the gov't provides a transfer that results in a benefit to the recipient and that the transfer is specific to a product, firm or industry. The more the transfer affects production and trade (imports or exports), the more likely the transfer is to be prohibited or limited. Green light/box subsidies are said to be non-trade (or minimally) distorting and are allowable. For industrial goods there are more conditions placed upon the value of such support, but for agricultural goods green box support is unlimited. These sorts of subsidy programs are mostly aimed at correcting market failure problems, providing reform and contributing to productivity improvements. These are considered good subsidies that might even be welfare improving. That is, the transfer results in benefits more broadly than to just the recipients. The more production/trade-distorting is the support the more costly it is to society and is more a benefit to the recipient than to society at large. This results in DWLs and is more of a "bad" subsidy.

2.2.2 Given the WTO definition of a subsidy, how does it differ from an investment measure as per the WTO Agreement on Trade-Related Investment Measures? (5 pts)

A subsidy is a transfer by the government for a variety of purposes, but if the subsidy is given toward the investment of productive activity, then the firm's production is subsidized. A trade-related investment measure does not necessarily fit the WTO definition of a subsidy because it does not necessarily involve a transfer by the gov't. A TRIM can involve a variety of discriminatory regs to encourage investment and production, resulting is an investment distortion (to encourage or discourage investment/production). The measure can involve conditions upon foreign investment, including subsidy-like treatment (e.g., a lower tax rate to invest). Basically, the investment measure could be anything that encourages foreign producers to invest in the home country. This is designed to both encourage the investment but to try and attract R&D or encourage tech transfer. In China's case subsidies are not always required to entice foreign investment. The size of the mkt is enough of an incentive despite tech transfer or joint venture requirements as part of the conditions.

2.3 The WTO's multilateral liberalization process involves a comprehensive set of agreements that cover the rules and commitments on trade in goods and services. The EU's economic integration is achieved through its four freedoms which cover free movement of goods and services (as well as capital and people). Think about the WTO and EU processes when answering the following:

2.3.1 *List* important similarities/differences in the WTO process of liberalization for trade in goods and the EU's product market integration to facilitate the free movement of goods within EU member states. (10 pts)

Trade policy

- Tariff reductions: WTO pursues gradual liberalization whereas EU members states achieve duty-free rates within the EU and common external tariffs vis-à-vis non-EU
- WTO permitted TRQs in agriculture as a means to gradual reform; there is quota free intra-EU trade; where quotas existed prior to EU, the EU created common external TRQs

Dom regs

- Regs related to health and safety (SPS) and product specifications (TBT) were covered in WTO Agreements that required being based on science and being min trade distorting; EU processes were to approx. or harmonize regs across a wide range of sectors and concerns (acquis Communautaire)
- Free movement of goods at some point is affected by regs on TIS. Under WTO, TIS were not nec addressed to determine the reg effect on TIGs; in the EU free movement of goods could imply addressing regs on services that affect TIGs
- Under WTO, K movement affecting goods was only addressed under TRIMs; under EU free movement of K applies regardless of whether it is intended for goods or services sectors (so long as it was intended for commercial and not public activity)
- Other regs that apply to TIGs were covered under WTO agreements (gov't procurement, state trading enterprises, etc); EU required common regs to ensure national (manufacturing) firms compete on even terms as non-national firms

2.3.2 Think about how the WTO rules and commitments treat labor and capital under the modes of trade in services. How does this differ from free movement of labor and capital under the EU? Explain carefully. (5 pts)

Rules on L,K under WTO are incoherent because it is not part of the "trade liberalization" objective. Under the WTO rules, TIS are defined as occurring under 4 modes: cross-border trade; consumption abroad; commercial presence; and movement of natural persons. Commercial presence is any FDI affecting TIS under commercial sectors. For other forms of foreign K apart from FDI (e.g., loans/deposits or banking, and portfolio investment or financial services) sector-specific commitments are taken. Movement of natural persons is labor services working in commercial services sectors. EU's 4 freedoms specifically address foreign L and K (any types) to participate in all commercial sectors. Under EU, services are a residual freedom not covered by free movement of goods, labor and capital. It mostly deals with independent contractors.

Part 3. Answer the questions related to the scenario described in the paragraph below. Be specific and explain your answers to the best of your ability. Label graph(s) clearly and explain them. Use concepts you think will support your answer. (30 points)

The Uruguay Round (UR) of GATT negotiations that created the WTO was the last comprehensive trade deal that was agreed to multilaterally. The Doha Round negotiations, the follow-up set of trade talks to the UR, ended in 2008 over disagreements related to agriculture (among other aspects of the trade agenda). Even the world's poorer nations were divided, split between developing countries that were food net importers and those that were net exporters. Two technical aspects for agriculture, both aimed at developing countries, affected the negotiations: (1) the designation of "special agricultural products" (SAP); and (2) "special safeguard" (SSG) measures. The SAP designation would allow a country to specify 4-6% of all agricultural tariff lines to have smaller tariff cuts than the average cut that would have been required. The SSG measures would allow developing countries to raise tariffs temporarily above the bound tariff rates on any agricultural product, triggered automatically by either an import volume above a specified volume or when domestic prices fell below a specified price floor.

3.1 Think about how the designation of special agricultural products and special safeguard measures would affect WTO principles and how it might affect trade between developing countries. Based on that assessment, make a case for whether one or the other or whether both allowances would be best to include in a final trade deal. Make any assumptions explicit. (10 pts)

Focus on the WTO principles:

1. MFN – non-discrimination in tariff application among trading partners
2. Nat'al treatment – non-discimination or regs applied on Home vs Foreign (does not apply in these cases)
3. Predictability – thru bound rates; knowledge of the max degree of protection
4. Transparency – ability to measure the degree of protection and how trade policy is applied

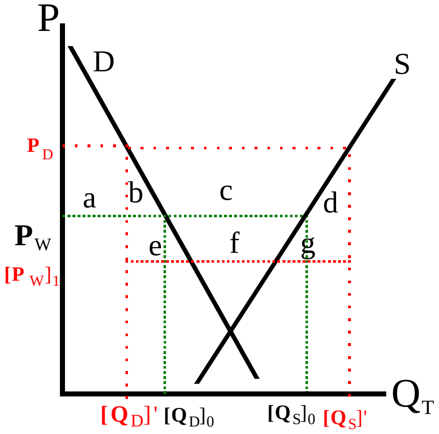
Depends what is argued:

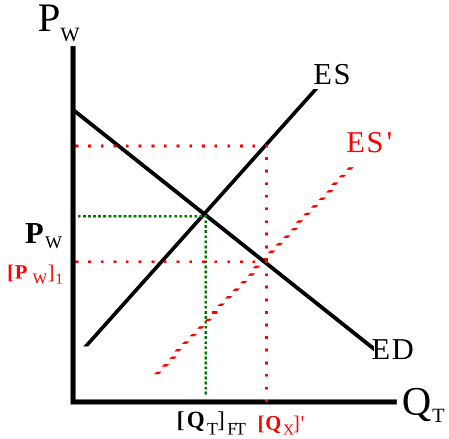
SAP designation: 4-6% of lines have smaller MFN tariff reductions. This complies with MFN, predictability and transparency and provides flexibility to slow the pace of reform and liberalization over a limited range of ag products. It provides more protection over a limited number of products but does not serve as a strict limit. This is more WTO consistent as an exception.

SSG measures: higher MFN tariffs above the bound rate raised automatically whenever there is an import surge or reduction in domestic prices is transparent but less predictable. This can be applied on a transparent basis (specified limit on volume and domestic price floor), but it has serious implications for predictability. It would be more appropriate to negotiate realistic bound rates and apply regular SGs in the threat of injury. Most developing countries already have high bound rates so having the right to SSGs will just ensure reform avoidance. The SSG because it sets limits on imports and domestic price is more of a means of managing the market as a quota does.

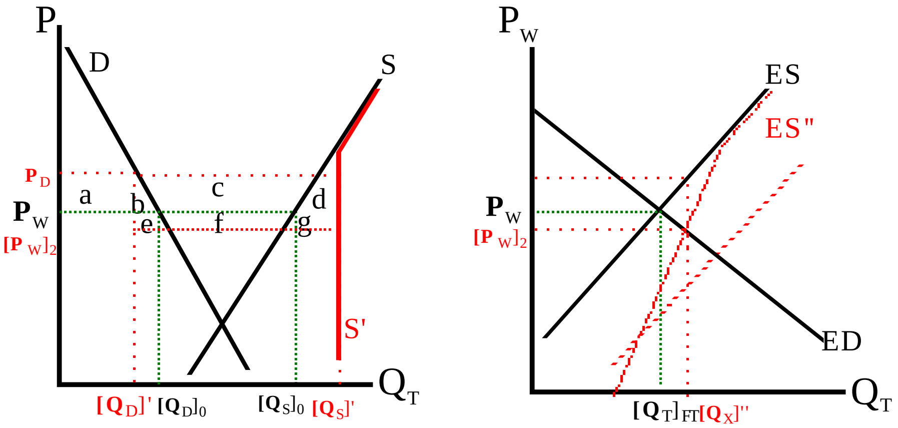
3.2 Explain why the WTO is more concerned with the use of direct export subsidies than production subsidies in achieving the same level of production. To support your answer, provide a simple model that shows the trade implications of an export subsidy. (10 pts)

Assume that the country is a net exporter and is using an export subsidy. Do not assume a net trade reversal situation – it is *NOT* the common mkt situation. If the purpose of a policy is to support some level of production, then a program that directly targets the production level is more appropriate. A production subsidy targeting the production level is more appropriate than an export subsidy to encourage production. Under the export subsidy shown on the right-panel figure, the domestic mkt has a higher price encouraging a greater prodn level, $[Q_S]'$.





3.3 In another graph, show how a production subsidy differs from the export subsidy. Would it matter what type of domestic support program was provided that led to the same level of production as under 3.2? Be specific. (10 pts)



In this case income support is provided conditional on production at $[Q_S]'$. The support level is lower than under 3.2 because the export volume is reduced. Domestic consumers are not taxed to consume the product and so a larger share stays at home. The export subsidy is smaller than in 3.2 as are the welfare losses. The world market is less distorted with P_W falling by less that under the export subsidy. A production subsidy could also meet the production level and be less trade distorting. So long as the DS program was not mkt price support at $[P_D]$ under 3.2 the DS program would be a welfare improvement over the export subsidy and less trade distorting.

Summary solutions: Exam Dec 2022

Part 1. Explain whether each statement is true, false, or whether it depends. (25 points)

1.1 A countervailing measure could be an example of a policy response to a foreign government's "buy national" program (i.e., for purchases of locally produced goods).

F. CVM is a response to an illegal subsidy. While a buy nat'al program can limit mkt access by discriminating in favor of local goods, it is not a subsidy by WTO rules because it does not involve a direct transfer from the government.

1.2 One might expect more anti-dumping cases at the WTO involving trade in agricultural commodities rather than industrial goods because of the widespread use of agricultural subsidies.

F. There are a few responses to this. First, ag subsidies are non-actionable assuming a country complies with its AMS ceilings. Second, dumping is not the same as an export subsidy. Dumping is a private firm selling at below cost of production or selling abroad at a price less than at home. An agricultural subsidy that results in exports would be financed from a transfer by the government. Third, industrial goods are prohibited from subsidies (except under strict conditions), but there are many "normal business practice" situations that might come up where a firm can be suspected on dumping products on the int'al mkt.

1.3 Under WTO rules covering trade in services, market access limitations are specified horizontally across all sectors, sector-by-sector, and by mode of provision. This would suggest that services sectors are a domestic economic activity.

F. The four modes of services suggest that trade in services is distinguished by how a service is provided: (1) cross-border such as a good is exported; (2) consumption abroad where the consumer moves across the border to have a service provided; (3) commercial presence through FDI; and (4) provided through the movement a mobile service provider. Recognition of this various forms in which consumer and service provider transact is an indication that services is no longer a domestic economic activity by domestic actors. Tech change (internet), a big driver of services, has led to greater provision of services across borders.

1.4 The WTO TRIPs (Trade-related intellectual properties) Agreement does not harmonize the standards for intellectual property but does harmonize the procedures for enforcement of intellectual property rights.

T. The rules on intellectual property are agreed at WIPO (World Intellectual Property Organization), but the WTO does harmonize the rules on how countries are supposed to enforce IP rules if a country or the firms of a country violate the IP rights. Multilateral sanctions (trade restrictions) are intended as the means to counteract trade or investment distortions by a firm/country that steals intellectual property from another firm/country.

1.5 The WTO Agreement on Agriculture specifies the types of support programs by how they affect trade. By that logic, it would be possible to distinguish income support programs and to categorize them as green, amber (i.e., yellow), or blue box.

T. The AoA does specify support programs by how they affect trade and so income support are categorized based on the degree to which they affect trade. Green box income support cannot affect production and thus is not conditional on production. Such support can increase or decrease support. Blue box income support is tied to production but was supposed to result in a reduction in production (the volume that was eligible for the support). Amber box income support was directly tied to production but had a limit on the value of the support.

Part 2. Briefly answer the following questions or respond to the specific statements. Relate your answers to concepts discussed in class and avoid unnecessary information. (45 points)

2.1 In the mid-2010s, mega-trade deals such as the Transpacific Partnership (TPP) Agreement and Transatlantic Trade and Investment Partnership (TTIP) were being negotiated by countries whose economies accounted for a large share of GDP and global trade. The talks covered a broad range of issues beyond the standard tariff reduction and increased market access provisions, including the following list: technical regulations, investment, trade in services, government procurement, competition, state-owned enterprises, intellectual property, labor, environment, and dispute settlement. Keep in mind how these issues relate to economic integration more broadly when answering the following:

2.1.1 TTIP was negotiated (though never concluded) between the US and EU, countries of similar income levels, population size, technology, and factor availability (i.e., labor and capital). Rank the top five areas listed that you would expect to result in the greatest degree of economic integration across the US and EU. (5 pts)

2.1.2 Select one from the ranking under 2.1.1 to explain why/how it might have led to the biggest promise for long-term economic benefit. Be specific. (10 pts)

Depends on the ranking and the justification.

- Cross-border services trade
- Tech regs
- Investment
- Competition
- Government procurement

Services, regulatory barriers, economic integration in services, new tech making services more tradable, time for mkts, consumers and regulators to respond to services integration; services share of the economy; services increasingly linked to sophisticated manu sectors. IP: US-EU both respect IP rights and have willingness/ability to enforce. One area in IP that the EU pushes is geographical indications, but this would be mostly about EU producers increasing P premiums for existing food/beverage products (feta, parma cheese, champagne, etc.).

2.2 Economists have long argued that tariffs are preferred to quotas and WTO rules on market access reflect that thinking. Nevertheless, the WTO Agreement on Agriculture allowed member states to negotiate the right to use tariff-rate quotas (TRQs). Think about market access restrictions and why TRQs might have been allowed when answering the following:

2.2.1 *List* reasons why economists prefer tariffs to quotas? (5 pts)

2.2.2 Think about the dynamic non-equivalence of an import tariff and a quota. From the perspective of a net importing country, why might the right to a TRQ have been negotiated? Be specific. (10 pts)

- Efficiency – does not affect private behavior directly
- WTO consistency – tariff is easy to apply in a predictable, transparent and non-discriminatory manner
- Administration – quota requires a licensing system that gives the right to import
- Quota results in rents that are dominated by large players which can result in non-competitive behavior (the rents tend to be large)

TRQs required a country to specify an in-quota tariff rate that was lower than the MFN rate and to specify the market access volume, an import quota. The idea was for a country to not

set an overall limit to imports like a normal quota, providing the flexibility to allow imports to enter but with some means of controlling against a flood of imports. The lower tariff would allow imports to enter to the specified rate, after which a higher MFN rate would be applied. If there was sensitivity to too much imports coming in, the MFN rate could be set much higher. Net importers would be interested in domestic mkt stability and a quota is a means of managing the market. In this way, the TRQ would provide more domestic mkt stability. Thus, the TRQ offers a bit of the benefit of each of the measures (tariff and quota).

2.3 The WTO Agreements attempt to strike a balance between a government's right to regulate the economy and limit a government's ability to restrict trade. Think about how the WTO Agreements on Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) might be examples of this when answering the following:

2.3.1 *List* some differences in what SPS regulations cover versus what TBT covers. (5 pts)

2.3.2 How might one argue that the SPS and TBT Agreements result in fewer trade disputes? How might one argue that these Agreements produce more trade disputes? (10 pts)

SPS: • Human health and safety issues • Animal/plant health and safety • Environmental health/safety	TBT: • Product stds • Packaging • Product labeling • Pharma products
Promoting trade with fewer disputes: • Rules consistent with WTO principles • Rules based on science – science-based stds/regs to promote common risk assessment methods and common understanding of risks / risk threasholds • Develop int'al stds or harmonization of regs (best industry practices) • Agreement that importer must prove a product is unsafe rather than use of protection to block trade	More disputes: • Science is contested and makes dispute settlement more political • Common stds and rigid harmonization can lead to regulatory failure and efficient mkt outcome • New tech or practices can make int'al stds bodies subject to criticism • Can highlight differences between rich and poor countries and set stds or reg threasholds too high

Part 3. Answer the questions related to the scenario described in the paragraph below. Be specific and explain your answers to the best of your ability. Label graph(s) clearly and explain them. Use concepts you think will support your answer. (30 points)

In August 2022 the US Congress passed the Inflation Reduction Act which is to serve as the US's cornerstone legislation in green technology. The legislation, due to take effect in January 2023, provides for $430bn in incentives (e.g., subsidies and tax breaks) to manufacturing companies to meet clean energy targets and assist in developing key technologies for the green transition (i.e., meeting US carbon reduction and environmental protection objectives). EU officials have raised alarms about the intent of the legislation and called on the US to ensure fair competition to avoid a dispute at the WTO.

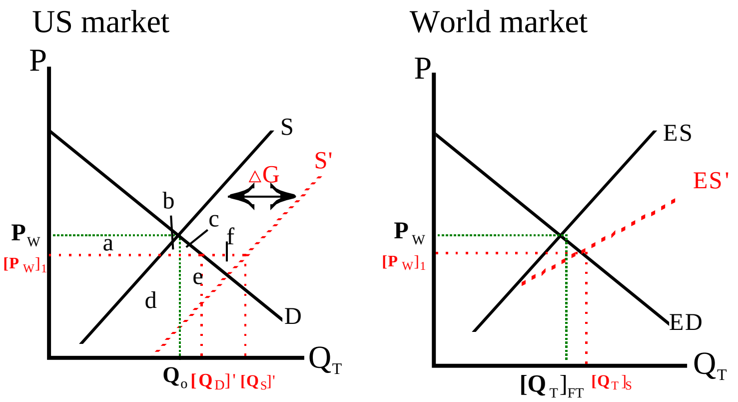
3.1 Think about the WTO principles and how they might apply in the context of subsidies (aimed at manufacturing sectors ranging from advanced machinery to heavy industry). *List* the relevant WTO principles and briefly relate how these could be relevant to the US legislation from the standpoint of the WTO. (5 pts)

The point here is to think about how WTO principles could apply to subsidies. As it is, subsidies for industrial goods are prohibited except for “green light” subsidies. So, the US legislation is bordering on WTO violations unless the subsidies are seen in the light of R+D and “environment-friendly” prodn of goods.

- MFN – non-discriminating against trade partners: subsidy would have to be applied in a manner that does not affect any particular member state disproportionately; would/could not support a sector intended to target some particular member state
- NT – non-discrimination against foreign good or manu of the good: subsidy would have to be given to foreign manu and domestic manu alike; problem is that to receive the subsidy foreign firm would have to establish in US (distort FDI)
- Predictability – the ceiling of the value of the subsidy should be set and the per unit value of the subsidy made known; least-trade distorting; proportionate to achieve the “green” objective
- Transparency – the value of the subsidy would be made known and the degree of support be measurable

Obviously, the predictability and transparency of the subsidy in manufacturing is more difficult to determine relative to agriculture. It depends on what is being subsidized (R+D) or a subsidy for FDI in the US to build up the US’s manu capacity. The subsidy starts to look like industrial policy rather than environment or for R+D purposes.

3.2 The objective of the subsidy program is to develop and promote cleaner manufacturing processes and production of new, greener products. How could this program affect the US domestic market and the world market through trade? Provide a graph of the US domestic manufacturing sector and its potential trade effects on the world market (i.e., a two-panel diagram of the US and the world market). Make whatever assumptions you make explicit but think of this as a multi-country world. Discuss the welfare effects in your graph. Can it be argued that the subsidies can be welfare improving overall (ignore any other policy measures)? Carefully explain. (15 pts)



The US is shown, for simplicity, to have balanced trade in the sector(s) in question before the new legislation. The subsidies shift supply to the right to S’. The US is a net exporter shifting the ES to ES’. The increased world exports lowers Pw to Pw’ and the net X position of the US is $[Q_S]'$ - $[Q_D]'$. Consumers benefit from the lower Pw. Producers lose (a+b+c) but gain (d+e+f). The cost of the subsidy is unknown, but involves a cost of ΔG. It is expected that the subsidy is likely to be greater than (d+e+f) or else it begs the question why the private sector did not take on the investment themselves. Nevertheless, the subsidy could be welfare improving.

3.3 Some US officials have tried to encourage the EU to join the US in offering such green subsidies rather than challenge the US. How could the EU matching the US's subsidies affect the welfare effects that you discuss in 3.2? Bs specific. (5 pts)

If the EU were to match US subsidies, the dueling programs could simply amount to increased costs of program per unit of output, reducing welfare benefits and increasing cost to the gov't. It could start to approximate a subsidy tit-for-tat war where int'al P fall benefitting consumers but the production and efficiency benefit to the producer is more dependent on gov't transfers. Pw would fall further than Pw' and could result in a bigger decrease in P relative to increase in Q_T. The cost of the subsidy would increase.

3.4 Think about the WTO Agreement on Trade-Related Investment Measures. How might the US legislation be a concern for the EU in this regard? Be specific. (5 pts)

TRIMS: a distortion of investment can also be a distortion of trade. If the US program provides subsidies to EU producers who relocate to the US, then manu prodn in the US can increase relative to the EU and the US could export to the EU. This would be the EU's concerns with the US legislation.

Dec 2021

Part 1. Explain whether each statement is true, false, or whether it depends. If depends is your answer, be sure to explain upon what it depends. (25 points)

1.1 Intellectual property protection is an example of government intervention that is intended to correct a market failure problem that does not create other market-related problems.

> F/D. It is true that IP protection is intended to correct a market failure – in the absence of protection there will be too little R&D or invention or creative/artistic work – but in providing such protection it gives the owner of the IP the right to earn monopoly rents and/or limiting output, raising a problem of access and affordability. Patent protection gives the patent holder 20 years of monopoly rights and the ability to price accordingly. Patent rights can stifle the share economy.

1.2 A regulation restricting the total number of service suppliers that can provide a service on the domestic market would be an example of a limitation on national treatment.

> F/D. National treatment is about ensuring some regulation is applied on foreigners in the same manner as to locals. A restriction on the total number of service suppliers applies to both foreign and local so it limits overall market access (MA) and not national treatment (NT). If the regulation stated that there could be five providers but only one could be foreign, then it would limit both MA and NT.

1.3 Consider the use of policy intervention (either a market access restriction or a subsidy) to correct for an externality in the import sector of the home country. A big difference between the market access restriction and the subsidy is that the welfare improvement under the subsidy is less likely to come at the expense of trading partners.

> D/T. A MA restriction is typically intended to restrict imports, affecting both the demand and supply-side of the market. The MA restriction isolates the domestic market. By contrast, a subsidy (without MA restriction) can be more directly targeted to achieve the social policy objective without isolating the dom mkt or affecting both sides of the market. While the subsidy can still affect the welfare of trading partners it might not directly affect the world market to the same extent (i.e., less trade distorting).

1.4 The process of liberalizing trade in goods under the WTO has essentially followed along the same lines as the EU's process to promote product market integration.

> F. The process of liberalizing trade under the WTO is about reducing trade policy measures and addressing the use of domestic regulations that affect trade (finding proportional regulations that are least-trade distorting). Product market integration goes much further to limit use of regulations that affect trade by harmonizing or approximating regulations to reduce policy/regulatory advantages. For example, the WTO SPS + TBT are not (and do not require) harmon/approx. of regs as is the EU's acquis Communautaire.

1.5 The choice of trade policy, whether an import tariff or quota, can have implications for whether a domestic monopoly can use its market power (assuming that the competition authorities do not prevent the firm from abusing its market power).

> T/D. An import tariff only gives protection up to the value of the price differential. A quota gives firm(s) more control over the domestic market because it limits volume. If the volume on the domestic market is sufficiently reduced, then the firm(s) can have

greater control over price and the ability to seek monopoly rents. The way a quota is set up can give the domestic firm(s) greater control over the market and implies quota rents can be earned. Depends on how the quota is administered and how it affects the number of market participants.

Part 2. Briefly answer the following questions or respond to the specific statements. Relate your answers to concepts discussed in class and avoid unnecessary information. (45 points)

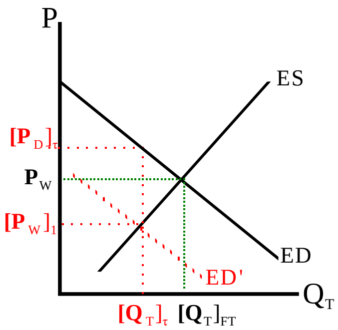
2.1 The EU is often accused of being a net importer of agricultural products whose market has high levels of protection and producer support. The US, by contrast, is a net exporter of many agricultural commodities whose markets tend to be more open, but where subsidies are granted to domestic producers.

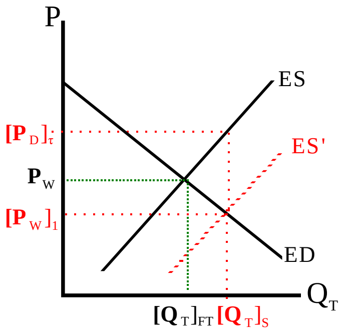
2.1.1 Given that both the EU and US are large economies, discuss how the trade policy regimes, as described above, affect world commodity markets? (10 pts)

From the EU's perspective the trade policy regime affects ED (↑S → ↓ED).
From the US's perspective the trade policy regime affects ES (↑S → ↑ES).

2.1.2 From a global trade perspective, explain whether you think one or the other is more trade distortive. Be specific. (5 pts)

Focus on how P_W and Q_T is affected and the potential numbers of countries that are affected. The EU's policy affects exporting countries wanting to access their economy. The US's policy affects the world price and quantity traded affecting import countries and export countries alike because it is a large country. The lower world price could be a benefit to net importing countries. In the US case the area representing gov't transfer $\{([P_D] - [P_W]_1)\cdot[Q_T]_1\}$ is larger, including the part representing int'al Y transfers.





2.2 Whenever there are limitations in the precision of economic theory to explain a concept, it will ensure that the legal definition governing the economic behavior related to the concept will be subject to interpretation. Consider the definition of dumping of a good on the international market. Keep in mind how the theoretical imprecision of the concept gives rise to problems in formulating trade rules when answering the following:

2.2.1 What is dumping and how does it differ from an export subsidy. (10 pts)

Dumping is defined two ways: (1) selling at P_W < cost (marginal or average cost) or (2) $P_W < P_D$. An export subsidy can be selling at $P_W < P_D$ but in this case the government provides a transfer based on that export performance. In the case of dumping there is no direct transfer by the government and the behavior can be "normal business practice".

2.2.2 Why or how does the theoretical imprecision behind dumping result in a weakening of WTO rules? Explain. (5 pts)

In the case of an export subsidy, a countervailing measure is appropriate to neutralize the effect of the subsidy. For an anti-dumping duty a tariff higher than the MFN rate of tariff is applied that might not be neutralizing an unfair trade behavior. Compare AD to other contingency measures, e.g., SGs and CVMs which are better defined and which are used to a lesser extent than AD. It is because dumping is imprecise and difficult to prove that it should be used less often, but just the opposite is the case.

2.3 WTO rules are based on how the basic principles are applied to trade in goods and services. Think about how the most favored nation and national treatment principles are applied in the context of market access (MA) commitments on trade in goods and services when answering the following:

2.3.1 *List* some differences in the characteristics of goods and services. (5 pts)

* Non-tangible * non-storable * heterogeneous * non-separable * tend to be activities in the public domain (education, health) rather than commercial (private) activities

2.3.2 Based on your list in 2.3.1, explain how MA commitments on services differs from MA commitments on goods. (10 pts)

Trade policy does not really apply to services nor does the concept of a subsidy. Only domestic regulations are considered when applied to commercial services provision. Since trade policy does not apply, domestic regulations play a bigger role in service provision. Services are subject to economies of scale and internalities (network effects that lower cost to users) which affects market structure (and competition) and requires regulation (licensing for certification of services provision). Market access is about limiting foreign participation in service provision and national treatment is about how regs are applied to foreign and domestic firms and provision of the service. Limitations on market access and national treatment in services transactions are related to how they are provided: (mode 1) cross border; (mode 2) consumption abroad; (mode 3) commercial presence; and (mode 4) natural person.

Part 3. Answer the questions related to the scenario described in the paragraph below. Be specific and explain your answers to the best of your ability. Label graph(s) clearly and explain them. Use concepts you think will support your answer. (30 points)

Economists and trade lawyers agree that there can be equivalence in economic effect from the use of a domestic regulation and a trade policy measure. Under WTO rules, governments can apply regulations over all sorts of economic activity. These are justified on the basis that the regulation achieves some social policy objective rather than trade protection.

3.1 Think about how the regulation of a good might achieve some social policy objective. Consider a domestic regulation that would be categorized as a technical barrier to trade (TBT), a trade-related investment measure (TRIMs), or a measure to protect trade-related intellectual property (TRIPs). Would you argue that the regulation has a trade-policy equivalent? If so, what would be the trade policy equivalent of the regulation? Would the regulation violate a WTO rule even if did achieve some social policy objective? Formulate your answers in a chart as provided below, or at least structure your answer such that it includes the relevant info for each type of regulation. (20 pts)

Type of domestic regulation as per WTO rule:	Column 1	Column 2	Column 3
	Give an example of a regulation achieving a relevant social policy objective	What is the trade policy equivalent of the regulation? Briefly explain	Would the regulation violate a WTO rule? Explain
TBT (careful not to confuse TBT and SPS!)	Product safety regulation (air bag in a car) or a technical req for the car lights to turn on when the car is started (improve visibility for other drivers).	The foreign produced car is required to have air bags as the dom good or have the lights turn on when the car is started. Assumes that the foreign good in its home mkt is not subject to the same requirement. If so, then it is like (a specific) tax on imports.	Must prove whether the reg is based on science and achieves an improvement in product performance. It must also not be solely a means of restricting the imported good (i.e., proportionality).
TRIMs	Local content requirement (e.g., 80% use of local inputs in the production of a final good).	Foreign firms operating in Home are required to use 80% of components sourced from Home. This assumes that only 20% of components of the final good can be imported. This is an import quota on value/ volume of imported components.	Local content reqs are prohibited precisely because they violate rules on quotas.
TRIPs	Patent protection Copyright Geographical indication Trademark Each of these IP types are argued to correct mkt failure or to improve mkt functioning.	The patent protection gives a Home producer exclusive right to produce a good. Foreign firms are prevented from producing the good (or a like good) until the protection expires (after 20 yrs). This gives the Home producer monopoly power of sales of the good both at Home and in Foreign. It serves as a ban on imports (on competitors) or an export subsidy to the holder of the patent. If the patent is licensed, then it is like an export tax on the rival exporting firm.	There is no violation of WTO rules. Patent rules are developed at the WIPO. WTO only has rules on IP protection. If a patent is awarded it gives exclusivity for 20 yrs and all WTO member countries are required to enforce the patent rights (even if monopoly power violates competition policy).

3.2 Choose one domestic regulation in 3.1 (TBT, TRIMs or TRIPs) and develop a simple trade model that shows how that regulation has a trade policy equivalent. (10 pts)

Depends on example: shift ES or ED depending on how the reg affects competition and P_W.

Provide a graph of the market of Home (or Foreign) and the world market. The graph and accompanying info requires one to identify: (1) the country imposing the regulation (Home) and the country/firm affected by the regulation (Foreign); (2) the product market; and (3) whether the country is a net exporter or net importer of the good (and size of country). The world market (ES and ED) is to be affected according to the scenario described in column 3 of the table. The point is to explain how it affects trade.