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How Can the WTO be More Effective in Resolving International Agricultural Trade Disputes

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Abstract:
This study evaluates the effectiveness of the WTO dispute settlement mechanism in agricultural trade. Through three case studies, it is found that some agricultural legal rules under the current rules are vague, the dispute resolution process is lengthy, and the participation of developing countries is limited. The study confirms three hypotheses and partially supports the fourth, suggesting the need for reform. The study recommends clarifying legal terminology, strengthening support for developing countries, and institutionalizing mediation. These recommendations are intended to enhance the effectiveness and authority of WTO dispute settlement.

Keywords: WTO Disputes, Agricultural Trade

1. Introduction

International agricultural trade has been a central focus of conflict within the global trading system for many decades. Since these products are so closely linked with national food security, economic development, and social stability, there is palpable harm in protecting them from import competition through tariffs, subsidies, and other trade policy instruments. The WTO Dispute Settlement Mechanism first intended to bring order into this chaotic environment and has since then been very significant in agricultural trade disputes. However, the DSM has many weaknesses, such as difficulty enforcing rules, paralysis of the Appellate Body, and underrepresentation of developing countries; these have allowed many scholars and policymakers to consider reforms that would further enhance the WTO's efficiency in dealing with agricultural trade disputes.

The DSM of the WTO was established in 1995, following the Uruguay Round negotiations, and is based on the so-called "Dispute Settlement Understanding," which allows countries to bring their disputes before a panel and, if necessary, the Appellate Body. This is supposed to give a degree of legal certainty and stability to world trade. In agribusiness, however, it does not seem to be working. Agricultural trade disputes as peculiarly political, involving government subsidies, market access, and food safety standards, which make WTO rulings difficult to enforce. Thus, a system designed to yield stability has become a politically deadlock situation, which raises critical questions as to its future governance on issues regarding agricultural trade.

2. Thesis and Road Map

The research question of this paper is how the WTO can be more effective in resolving international agricultural trade disputes. The thesis of the paper is that the WTO's dispute settlement mechanism lacks effectiveness in agricultural trade due to long legal procedures, vague rules, and developing countries' limited participation. To improve this, the WTO should adopt

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mediation, ensuring fair participation, quicker dispute resolution, and stronger decision enforcement.

In the fourth section, this paper will review existing scholarly research on agricultural trade, highlight key controversies in dispute resolution, analyze the challenges developing countries face in the WTO dispute settlement mechanism, and examine the crisis triggered by the suspension of the Appellate Body. Additionally, it will identify gaps in the current research landscape. The fifth section will outline the research framework and hypotheses developed for this study. The sixth section will apply a case analysis method to systematically test each hypothesis. In the seventh section, the paper will propose targeted legal recommendations, and finally, the eighth section will summarize the findings and present the research conclusions.

3. Literature Review

The WTO dispute settlement mechanism has always been one of the key focal points in international trade, particularly in agricultural trade. This paper tries to bring together the current status of research on the WTO dispute settlement mechanism in agricultural trade disputes, ranging from analyses of challenges at the legal and institutional levels through to estimates of the consequences of the Appellate Body's failure to maintain stability in agricultural trade and appraisals of the difficulties developing countries face in using the DSM to protect their trade interests. The DSM has been described as one of the main pillars of the WTO system and is lauded for its effectiveness. However, there are some shortcomings in its implementation, particularly concerning countries considered developing. This refers to the dilemmas arising in dispute settlement that might be taken into consideration during subsequent research on DSM effectiveness.

3.1 The Paralysis of the WTO Appellate Body and Its Impact

One of the greatest challenges in recent decades to the WTO dispute settlement system has come from the paralysis of the Appellate Body. Since December 2019, this has effectively meant that the Appellate Body of the WTO has been incapacitated because the US has effectively blocked the appointment of judges, hence denying all Member States a final ruling. In further analysis of the crisis, Fiorini et al. identified additional factors, including the length of trials, disputes on the competence of judges, and the application of legal precedents. This development has put the legitimacy and operability of the WTO dispute settlement mechanism into question, with significant implications for the stability of global agricultural trade. Considering this, in order to respond to the challenges, the EU has created a Multi-party Interim Appeal Arbitration Arrangement with some other member states to maintain a two-tier dispute settlement system. This mechanism, however, has a rather limited scope of application and lacks US support, making it hardly feasible to fully replace the WTO Appellate Body.

3.2 Export Restrictions and the WTO's Regulatory Challenges

Agricultural trade is an integral part of the global trading system, and the efficiency and enforcement of the WTO dispute settlement mechanism directly affect global food security. Article 11 of the GATT prohibits quantitative export restrictions, except for "temporary" measures taken to prevent or alleviate severe shortages of food or basic products, as specified in paragraph 2(a) (World Trade Organization, 1994). However, the term "interim" is not clearly defined, leading to inconsistent interpretations by member States. For example, during the 2007-2010 global food crisis, several countries, including India and Russia, imposed export bans on staples such as rice and wheat on the grounds of domestic food security.

While claimed to be temporary, these restrictions have been long-lasting, disrupting global supply chains and exacerbating food price volatility. According to WTO, the lack of a precise legal definition allows countries to take advantage of this exception, making it difficult for the WTO to effectively challenge such measures (World Trade Organization, 2025). To address the GATT Article 11 loophole, the WTO introduced Article 12 of the Agreement on Agriculture, which requires member countries to provide written notice to the Committee on Agriculture before imposing export restrictions and to consult with affected importing countries, and the term "to the extent possible" in the Agreement allows exporting countries to avoid notification obligations. This loophole limits the effectiveness of Article 12 in curbing the excessive use of export restrictions by major food-producing countries. For example, during the COVID-19 pandemic, major grain exporters such as Vietnam and Kazakhstan suddenly imposed export bans on rice and wheat without prior consultation, severely affecting grain importers (Kowalska, Budzyńska, and Białowąs, 2022). Kowalska compared food export restrictions during the 2007-2008 financial crisis with the COVID-19 pandemic in 2020, analyzing the timing and duration of the measures, the products affected, and their impact on the Global Food Security Index (GFSI). The data shows that the negative impact of export restrictions imposed in 2020 on global food security is significant. Kowalska pointed out that while WTO rules, in principle, prohibit member countries from imposing restrictions on food exports, their exceptions are open to interpretation, making enforcement difficult (Kowalska, Budzyńska, and Białowąs, 2022).

3.3 Developing Countries' Disadvantaged Position in the WTO Dispute Settlement Mechanism

Since its inception, the WTO dispute settlement system has theoretically been open to all members, regardless of the size of their economies. In practice, however, developing countries are disadvantaged in using the system to protect their trade interests. Cardwell's study found that developing countries often lack adequate means of retaliation in response to food export restrictions, leaving them with trade deficits in other areas or unable to exert equal economic pressure on exporting countries. This issue highlights the shortcomings of the WTO in maintaining global food market stability (Cardwell and Kerr 2014). Moreover, the WTO dispute settlement system's high litigation costs and lengthy trial time are also highly unfavorable to developing countries. Iida's analysis shows that WTO dispute settlement cases often take years to complete, and many developing countries have limited legal resources to use the DSM to defend their agricultural interests. Therefore, improving the accessibility of the WTO dispute settlement mechanism for developing countries has become one of the important directions of the WTO system reform (Iida, 2004).

3.4 Existing Research Conclusions on WTO Reform

To cope with the challenges of WTO in the settlement of agricultural disputes, the existing research has put forward a variety of reform schemes. First, enhancing the enforcement and transparency of WTO rules is essential. Fiorini et al. suggested that a fast-track hearing mechanism for agricultural disputes could be established to reduce litigation time and improve the enforcement of rulings. This will reduce the market uncertainty caused by trade disputes and help ensure the stability of agricultural production and food supply (Fiorini et al., 2020). Finally, the study recommends providing more legal assistance for developing countries to participate more effectively in the WTO dispute settlement mechanism. For example, Iida argues that by optimizing dispute settlement procedures, such as establishing legal aid funds or streamlining litigation processes, developing countries can reduce legal costs and participate more equitably in developing and enforcing international agricultural trade rules (Iida 2004).

3.5 Research Gaps: The Need for a Focus on Effectiveness

The existing research mainly focuses on the legal framework and case analysis of the WTO dispute settlement mechanism, but there is little research on the enforcement effect of rulings. Moreover, while the WTO dispute settlement mechanism is theoretically available to all members, the scope of the problem and solutions remain unclear as developing countries struggle to effectively use the DSM to defend their interests due to limited legal resources. Therefore, future studies should focus on enforcing WTO dispute rulings to more comprehensively evaluate the effects of the WTO dispute settlement mechanism.

4. Methodology and Hypotheses

This study adopts a qualitative research method, combining primary and secondary data, to deeply explore the effectiveness of the WTO dispute settlement mechanism in agricultural trade disputes and its reform direction. The primary data include legal texts, dispute settlement cases and institutional resolutions related to the WTO dispute settlement mechanism; the secondary data includes academic papers, expert comments and policy reports, to analyze different scholars' interpretations of agricultural trade disputes and the applicability of WTO rules. WTO dispute engagement data comes from the official WTO dataset and the ACWL annual report. Engagement is measured by the number of times a country acts as a complainant, respondent, or third party. Legal aid coverage is measured by the number of cases assisted by ACWL each year.

This paper tests 4 hypotheses as potential answers to the research question. They are:

l H_0: The WTO effectively resolves international agricultural trade disputes and does not need reform or adjustment.

l H1: The WTO's ability to resolve agricultural trade disputes is affected by the ambiguity of legal provisions. lengthy litigation procedures.

l H2: The WTO's ability to resolve agricultural trade disputes is affected by the lengthy litigation procedures.

l H3: Due to limited legal resources and economic capabilities, developing countries have a low level of participation in the trade dispute settlement process, which affects its effectiveness.

l H4: WTO member countries prefer to resolve agricultural trade disputes through mediation. Therefore, the WTO should strengthen and promote the mediation mechanism to improve the efficiency of dispute settlement.

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5. Case Studies

Mediation in the WTO dispute settlement mechanism has significant advantages in agricultural trade disputes. It is more practical considering the high cost of litigation, uncertain legal applicability, and limited litigation capacity of developing countries. To further explore mediation's role in WTO dispute settlement, this paper will analyze the following cases: (1) the participation of developing countries in WTO dispute settlement from 1995 to 2023; (2)Brazil - US Cotton Case (DS267); (3) EU - Argentina Olive Oil Dispute.

5.1 The participation of developing countries in WTO dispute settlement from 1995 to 2023

Developing countries face many challenges when using the WTO Dispute Settlement Mechanism (DSM), such as high litigation costs, limited legal expertise, and institutional constraints (Busch and Pelc 2019). Therefore, we hypothesize that the constraints of legal resources and economic capacity lead to the low participation of developing countries in trade dispute settlement, which affects effectiveness. To test this hypothesis, this study analyzes the participation of developing countries in WTO dispute settlement from 1995 to 2023, focusing on their litigation participation and financial constraints.

A study from 1995 to 2008 (Table 1) shows that there is a clear gap between the participation of developed and developing countries in the WTO dispute settlement mechanism (WTO 2008, quoted in World Bank 2023, 27). The US and the European Union dominate the WTO dispute settlement mechanism, reflecting their strong legal resources, economic power, and active use of the dispute settlement mechanism. In contrast, only a few developing countries, such as Brazil (24), India (18), and Mexico (20), were relatively active in dispute settlement mechanisms, suggesting an imbalance in developing countries' access to WTO legal mechanisms. In addition, despite the rapid rise of China's economy during this period, there were only 3 complainants and 13 respondents, suggesting that China is more in a reactive than active litigation position in dispute resolution. Many smaller developing countries, such as South Africa, barely engage in dispute resolution and choose to intervene as a "third party", such as Thailand, Brazil and India. This reflects the lack of sufficient legal and financial resources in developing countries to initiate or respond to litigation directly but still wish to participate in dispute resolution as a third party and influence adjudication.

Table 1 WTO Member Dispute Participation as Complainant, Respondent, and Third Party, 1995-2008

Country	Complainant	Respondent	Third Party
EC	78	89	82
United State	91	116	73
Australia	7	10	47
Canada	31	15	64
Japan	13	15	90
Korea	13	13	43
New Zealand	7	0	27
Norway	3	0	27
Singapore	1	0	4
Switzerland	4	0	8
Brazil	24	14	49
Chile	10	12	22
China	3	13	62
Mexico	20	14	45
South Africa	0	3	3
Sri Lanka	1	0	3
Thailand	13	2	37
Trinidad and Tobago	1	8	3
Turkey	2	1	18
Uruguay	1	2	5

Venezuela	1	2	15
Total	415	415	938

To help developing countries make better use of dispute settlement mechanisms, the WTO Legal Advisory Center (ACWL) provides low-cost legal aid and lowers the threshold for litigation (Advisory Centre on WTO Law 2024). However, despite this support, the actual impact of developing countries in WTO dispute settlement remains uncertain. A study of the ACWL annual reports from 2014 to 2023 found that in 2018 the participation of developing countries in WTO dispute cases peaked (18 cases) and the number of cases supported by the ACWL also reached 10. However, since then, the number of cases has been declining year by year, and by 2023 there are only three cases left, and the ACWL has not added any new cases, which may be related to the WTO Appellate Body crisis. Despite this, ACWL's funding has continued to grow, from US$3.2 million in 2014 to US$5.5 million in 2023, indicating that external funding is increasing, but participation in litigation in developing countries has not been matched by the increase (Figure 1).

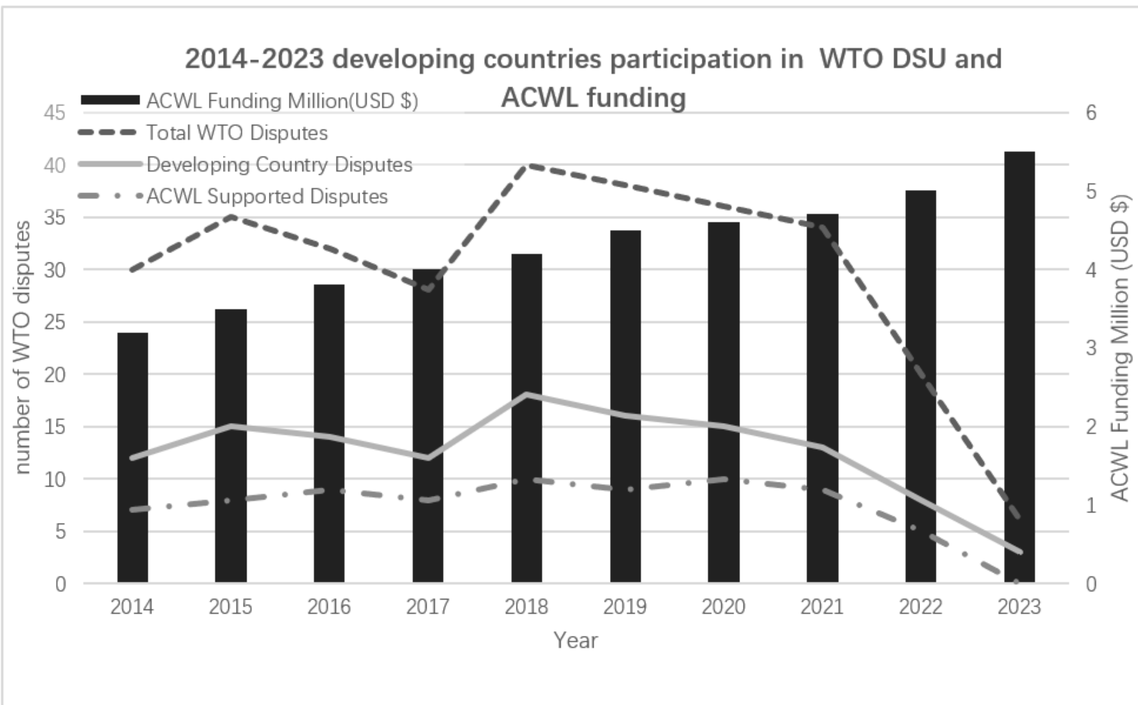

Figure 1. 2014-2023 developing countries participation in WTO DSU and ACWL funding

To sum up, we conclude that the WTO dispute settlement mechanism is mainly dominated by developed countries, and a few developing countries are also relatively active, but most developing countries hardly participate in litigation, mainly because they lack financial and legal capacity and are difficult to bear the high litigation costs. As a result, they are more inclined to participate as a third party to reduce costs. Even with access to legal aid, many developing countries still find it difficult to effectively use the WTO dispute settlement mechanism. This trend suggests that financial support alone may not be sufficient to promote more active participation of developing countries in trade dispute settlement. Therefore, this hypothesis is partially valid.

5.2 Brazil - US Cotton Case (DS267)

Brazil v. US cotton subsidies (DS267) is one of the most influential agricultural trade cases under the WTO dispute settlement mechanism and the first case in which a developing country successfully challenged a developed country's agricultural subsidy policy. The case lasted for more than eight years and profoundly impacted on the WTO's regulation of agricultural subsidies. The United States has long relied on the Farm Bill to provide financial support to cotton farmers, and the Farm Security and Rural Investment Act of 2002 further strengthened subsidies, sparking dissatisfaction in Brazil and eventually becoming the core focus of the DS267 dispute (WTO, 2002). The dispute mainly revolved around the three most controversial

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forms of subsidies.

a) Direct Payments: Annex 2 of Article 6: Domestic Support Commitments of the Agreement on Agriculture stipulates that Green Box Support should meet the requirement of not affecting production and trade (World Trade Organization 1994).

b) Counter-Cyclical Payments (CCPs): The United States claims that counter-cyclical payments are calculated based on farmers past planting records, not adjusted according to current production or market price changes, and therefore cannot directly encourage farmers to increase production.

c) "Step 2" subsidies: The United States believes Step 2 subsidies are a market adjustment mechanism that helps the domestic cotton industry cope with market fluctuations rather than violating the export performance-linked subsidies prohibited by Article 9.1(a) of the Agreement on Agriculture.

Brazil v. the United States on cotton subsidies reflects the problem of the effectiveness of DSM. First, the WTO Agreement on Agriculture and the Agreement on Subsidies and Countervailing Measures (SCM Agreement) are ambiguous in the definition and application criteria of subsidies, allowing member states to circumvent their obligations by taking advantage of loopholes in the rules. For example, in the DS267 case, the United States attempted to classify countercyclical payments (CCPs) as Green Box Support. Still, the WTO ultimately ruled that they were linked to market prices and did not meet the Green Box criteria. This dispute reflects the vague definition of criteria such as "decoupled from production" and "no trade-distorting effects". In addition, the terms such as "price suppression" and "implicit export subsidies" lack clear quantitative criteria, allowing member states to use these legal uncertainties to defend themselves during the dispute settlement process, weakening the binding force of WTO rules. Second, in the DS267 case, the entire litigation lasted nearly eight years, from Brazil's filing of the lawsuit in 2002 to the final ruling of the Appellate Body (2008) and the enforcement procedure (2010). During this period, the United States continued to implement subsidies, damaging the market share of Brazil and other cotton-exporting countries. In addition, even if the ruling takes effect, the compliance procedure still requires additional time to supervise and implement. This lengthy dispute settlement process has prevented the victim country from obtaining effective relief promptly, calling into question the efficiency of the DSM.

5.3 EU - Argentina Olive Oil Dispute (DS330)

In the DSM, member countries often face problems such as high litigation costs, complicated procedures, and impact on bilateral trade relations. Therefore, we assume that WTO member countries prefer to resolve agricultural trade disputes through mediation. Therefore, the WTO should strengthen and promote the mediation mechanism to improve the efficiency of dispute settlement. The EU-Argentina olive oil market access dispute (DS330) is a successful WTO mediation case (WTO, 2024). The EU-Argentina olive oil market access dispute was resolved through the WTO mediation mechanism, avoiding formal litigation. This case not only affected the bilateral trade relations between the EU and Argentina but also provided inspiration for the WTO DSM reform.

The points of dispute between the two parties are as follows:

a) Argentina believes that the EU's technical standards constitute de facto discriminatory market access barriers and violate the Agreement on Technical Barriers to Trade (TBT). Argentina points out that the EU's labeling and testing requirements for imported olive oil are too strict and lack scientific basis, constituting non-tariff barriers (NTBs) that unreasonably restrict Argentine olive oil from entering the EU market (Antimiani et al. 2021).

b) The EU, based on Article VI of GATT 1994, states that the imposition of countervailing duties must be based on reasonable investigations, and Argentina has failed to prove the existence of subsidies. Secondly, the EU claims that its market access standards are in line with the exceptions allowed by the WTO. The EU cited the SPS Agreement, arguing that member states have the right to take food safety measures if there is a scientific basis, and that under the TBT Agreement, the EU has the right to set technical standards as long as they do not constitute trade protectionism (Antimiani et al. 2021). The EU argued that the quality of Argentine olive oil does not meet the requirements of the EU market, so the import restrictions are reasonable and not discriminatory measures.

In the dispute between the EU and Argentina over olive oil market access, the two sides could have entered into formal litigation procedures under the WTO DSU but ultimately chose mediation to reach a solution and consensus (Antimiani et al. 2021). The active willingness of both parties to mediate ultimately led to the success of the negotiations and strengthened the foundation for economic cooperation between Argentina and the EU. In this case, we can see that if the mediation mechanism is more institutionalized, agricultural trade disputes can be resolved through negotiation without having to enter lengthy legal procedures.

In recent years, due to the inability of the WTO Appellate Body to function properly, member countries have begun to look for more flexible ways to resolve trade disputes, among which mediation has become a highly sought-after option. Compared with traditional litigation, mediation is more flexible and efficient. It can not only reduce legal costs but also help trading partners maintain long-term cooperative relations and avoid the impact of fierce legal confrontation on bilateral trade. Jaemin Lee (2024) pointed out that Article 5 of the WTO DSU allows member countries to try mediation, consultation or mediation before litigation, but because there is no mandatory requirement, many countries still prefer to directly resort to arbitration or formal litigation and rarely use mediation to solve problems. However, mediation can not only serve as an alternative to litigation but also complement the existing arbitration mechanism (Panels and Arbitration), which is a better choice.

In addition, mediation is not legally binding like litigation, which means that if negotiations fail, the country will not face political or economic pressure from losing the case, so this approach may be more acceptable to developing and developed countries. Through mediation, countries can adjust their policies more flexibly instead of being forced to accept the final ruling of the WTO court. Therefore, the WTO should further promote the application of the mediation mechanism and make it a higher priority option for member countries when encountering trade disputes, thereby improving the fairness and efficiency of the entire dispute settlement system.

5.4 Cross-cutting Analysis

Table 2. Cases

Variable	Description	Data Source	Type
Legal Capacity	Number of cases with ACWL support	ACWL reports 2014–2023	Quantitative
Participation Level	Role in WTO DSU	WTO DSU statistics	Categorical
Funding Trend	ACWL annual budget (USD)	ACWL	Quantitative

Through the above three cases (Table 2), we have preliminarily demonstrated four hypotheses. Further, these assumptions are intrinsically linked. We can focus on two main areas: the ambiguity of WTO law affecting the implementation of DSM, and the resource constraints of developing countries affecting the choice of litigation or mediation.

In DS267, due to the unclear classification criteria of subsidies in the Agreement on Agriculture, the United States repeatedly used legal loopholes to defend itself in the lawsuit, delaying the case for eight years. As a relatively large developing country, Brazil spent a lot of money to deal with this lengthy lawsuit. Even if the WTO finally ruled that the US subsidies were illegal, the United States did not cancel the subsidies and only paid $300 million in compensation, which shows that the rulings of the dispute settlement mechanism cannot ensure that the victim countries obtain trade relief.

Further, when the litigation costs are high, the judgment standards are vague, and the execution of the ruling is uncertain, member states are more inclined to mediation rather than litigation. For example, in the DS330 case, The EU and Argentina chose mediation rather than litigation in their olive oil market access dispute, mainly based on economic factors, legal uncertainty, and political and diplomatic considerations. First, from an economic perspective, WTO litigation is costly, especially for developing countries, which often cannot afford the costs of lawyers, panel hearings, and long legal procedures. Furthermore, WTO rules in the agricultural sector are relatively complex, especially the vague provisions of the Agreement on Agriculture on "subsidies" and "market access", while the scope of application of technical barriers to trade and food safety standards often lacks clear basis for ruling. Argentina accused the EU of constituting a market access barrier for imported olive oil technical standards, but past WTO cases were inconsistent on this standard, making the outcome of the lawsuit unpredictable, so mediation became a safer option. In addition, political and diplomatic considerations also influenced the decision. Argentina is highly dependent on the EU market and is unwilling to cause trade tensions due to litigation. Once the litigation escalates, the EU may impose retaliatory tariffs or technical barriers to restrict the export of other agricultural products from Argentina. Therefore, the two sides finally chose to resolve the dispute through mediation to reach a compromise acceptable to both sides.

In summary, vague rules lead to delays in litigation, limited resources in developing countries make it impossible to support long-term litigation, and mediation has great potential due to its short cycle and low cost, but there are risks as the current rules are not enforceable, which ultimately affects the effectiveness of the DSM.

6. Recommendations

Given the current challenges, there is an urgent need to reform the WTO dispute settlement system and restore legal

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remedies. Based on this, the study proposes three suggestions to provide references for WTO dispute settlement mechanism reform, enhancing its efficiency and fairness in handling agricultural trade disputes and promoting international trade's stable growth.

6.1 Clarifying Ambiguities in Agricultural Legal Terms

The WTO should work to reduce the ambiguity of agricultural laws and regulations and reduce disputes caused by uncertainty in the application of laws. The WTO can update its official legal interpretation guidelines based on existing cases and provide detailed interpretations of key terms in legal documents such as the Agreement on Agriculture and the Agreement on Subsidies and Countervailing Duties to improve the transparency and consistency of the rules, which will help member countries to more accurately understand and apply WTO legal provisions in mediation and litigation.

6.2 Strengthening the dispute settlement capacity of developing countries

Due to the limited legal and economic resources of developing countries, the WTO can set up a special fund to help developing countries improve their dispute resolution capabilities. The WTO can cooperate with multilateral development agencies such as the World Bank and the United Nations Development Program, as well as regional development agencies (such as the Asian Development Bank and the African Development Bank) to establish a "Developing Countries Dispute Settlement Support Fund" funded by voluntary donations or international agencies to subsidize legal fees, translation, and consulting fees in mediation procedures, and give priority to supporting small developing countries with scarce resources.

6.3 Strengthening the WTO mediation mechanism

To reduce litigation costs and improve the ability of developing countries to participate in the WTO dispute settlement mechanism, the WTO should establish a mandatory mediation mechanism as a mandatory procedure after the failure of the consultation.

In terms of the operation of the rules, a neutral mediator should be introduced to preside over dispute settlement, rather than direct negotiations between the disputing parties. After the mediation, the parties to the dispute must submit a formal mediation result report. If an agreement is reached, the agreement will be enforceable to ensure that all parties fulfill their commitments. If the mediation fails to reach a consensus, the disputing parties can enter the formal litigation procedure. This mechanism will improve the fairness, operability and efficiency of the WTO dispute settlement system, especially in the case of limited legal and economic resources in developing countries and can better ensure their effective use of the WTO dispute settlement mechanism.

7. Conclusion

This study verifies the validity of hypotheses 1, 2, and 4, and partially verifies hypothesis 3, showing that the WTO has significant deficiencies in its effectiveness in resolving international agricultural trade disputes. The study found that this deficiency is mainly due to the interweaving of multiple factors: first, there are problems with unclear interpretation of legal terms and vague applicable standards in agricultural rules; second, the DSM itself has complicated procedures and a long litigation cycle; third, developing countries have structural disadvantages in terms of funds, legal resources, and negotiation capabilities. The above problems together reflect that the current WTO dispute settlement system is in urgent need of reform.

This study preliminarily verifies some hypotheses through case analysis, and based on this, puts forward policy recommendations for improving the WTO mediation mechanism, but there are still limitations.

First, this study mainly selects three representative cases, which can reflect the difficulties of developing countries in the WTO dispute settlement mechanism and the potential of the mediation mechanism to a certain extent. However, considering the diversity and complexity of agricultural trade disputes, it is difficult to comprehensively summarize the actions and institutional responses of all member states based on only three cases. Therefore, more case analysis is needed for further discussion in the future.

Secondly, although this study proposes reforms including the establishment of a mandatory mediation phase, they have not yet been empirically tested, and their feasibility remains uncertain, especially in the context of the current political atmosphere of the WTO and the highly divergent positions of member states. This study is still insufficient in analyzing the attitudes of developed and developing countries towards these reform proposals, which need to be further demonstrated in future research.

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