

Tariff Escalation: A Tax on Sustainability

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Tariff escalation has been a major concern for developing countries, which fear that it may inhibit their efforts to industrialization. Moreover, global trade in the processed products has been growing relatively faster than in primary products. Tariff escalation prohibits diversification. It effectively limits the scope for processing of agriculture and labour-intensive products in exporting countries

Introduction

Tariff escalation is a phenomenon where tariffs rise along the processing chain such that tariffs on the processed products (e.g. refined sugar) are higher than on the corresponding primary products (e.g. raw sugar).

If a country wants to protect its processing or manufacturing industry, it can set low tariffs on imported materials used by the industry (cutting the industry's costs) and set higher tariffs on finished products to protect the goods produced by the industry. When importing countries escalate their tariffs in this way, they make it more difficult for countries producing raw materials to process and manufacture value-added products for export. Tariff escalation exists in both developed and developing countries. For instance, a country may choose to impose no tariff on the import of raw leather, but a positive tariff on the import of leather manufactures such as shoes, garments or accessories. Barriers to trade in processed products are often more restrictive than on raw commodities. Tariffs on average are greater on processed products than on their less-processed forms. This increases the effective rate of protection

Tariff escalation is particularly pronounced for products that offer developing countries the best chance of starting industrial exports- including food industry products, textiles and clothing, footwear, leather products, rubber products and wood industry products

Literature Survey

According to a study on tariff escalation it was found that there was no import tariff on raw cocoa beans, a 20 percent tariff on roasted ones, and a 60 percent tariff on chocolate bars would be an

instance of tariff escalation in USA. For footwear, most-favoured-nation tariffs reach 260 per cent in Japan (for a pair of leather shoes valued at \$25), and average 33-58 per cent for certain rubber, plastic and textile shoes in the US and 18 per cent for shoes in Canada. Some of the products subject to tariff peaks or escalation (or both) are considered dynamic products of world trade. As a result developing countries' lack of market access constrains their human development possibilities by blocking their entry into dynamic industrial sectors - limiting their export earnings to traditional sectors. High tariffs in industrial countries also encourage developing country producers of labour-intensive manufactures to engage in wage competition - lower real wages, decreasing employment or both. Removal of tariff escalation and tariff peaks is necessary to promote diversification of exports from the South as well as for stopping the over-exploitation of natural resources

Analysis of tariff data from 22 countries indicate that the average tariffs on fully processed products exceed those on primary products, with differentials ranging from 2 percent for the United States to over 40 percent for Turkey. Over the entire group, the average tariffs range from 30 percent on fully processed goods, dropping to 20 percent on horticultural products, 18 percent on semi processed items, to 17 percent on primary products. As an example, most countries have no tariff on raw cocoa beans, with the exception of Australia, which has an ad valorem tariff equivalent of 1 percent. Tariff escalation affects a range of products, and its practice is not confined to industrial countries.

Tariffs increase with processing in 10 regions within the meats and sweeteners sectors and in 9 regions within the vegetable oils sector. It is commonly used in many developing countries to promote

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manufacturing activities. For example, among 18 major processing chains of developing country exports to industrial countries, the majority suffers from tariff escalation. Among major manufactured products, tariff escalation is most prevalent in textiles and clothing, leather and leather products and across a wide range of countries (both industrial and developing). Rubber products, wood, pulp, paper and furniture, and metals are also frequently subject to tariff escalation. These are all products in which many developing countries have comparative advantage. Tariff escalation biases protection in both developed and developing countries against agricultural and labour-intensive products. This holds back export-led growth and greater diversification in developing countries. It is more pronounced in commodity sectors such as meat, sugar, fruit, coffee, cocoa, and hides and skins most of which are of export interest to many of the poor developing countries. The EU tariff structure shows such tariff escalation. According to the WTO EU Trade Policy Review 2009, the average MFN tariff on primary food products was 9.9% in 2008, but for processed food products it was more than twice as high, at 19.4%. This is a serious disincentive for the development of processing industries in countries that do not benefit from preferences. However, tariff escalation is not a problem for those developing countries which benefit from preferences, such as African countries.

Similar results were found in other studies. For OECD countries, it was documented that the reduction of tariffs on processed products was lower than on primary products (OECD 1996; OECD 1997). A recent UNCTAD study (UNCTAD 2003) evaluated TE for 12 agricultural commodity pairs by averaging nominal tariffs for different processing stages in the Quad markets (Canada, the EU, Japan, and the US). It found that, with a few exceptions, the post-UR tariffs escalate not only between raw and semi-finished but also between semi-finished and finished products. On average, the escalations in Canada, Japan and the EU were higher between raw and finished products, while in the US the highest average escalation was found between semi-finished and finished goods. An earlier USDA study (USDA 2001) also showed TE in agricultural markets not only in the developed but also in the developing countries. Elamin and

Khaira (2004) have also quantified TE for several product groups and extended the analysis to assess the impact of some tariff cutting formulae, including the one proposed in the Harbinson draft modalities. Finally, the study by the Swedish Board for Agriculture (Burman and others, 2001) is fairly comprehensive in covering several grounds on tariff escalation, including some estimates on the impact on effective protection

According to E. Chevassus-Lozza and J. Gallezot emerging countries are denouncing the tariff escalation practiced by developed countries as an obstacle to the development of their transformation industry. This situation is particularly visible for agricultural and food products for the MFN tariffs negotiated by the EU at the WTO

According to Ramesh Sharma TE continues to remain for many product pairs even after the full implementation of the Uruguay Round tariff cuts. For the three developed countries covered here, escalation of bound tariffs was found for 16 of the 21 cases (3 countries times 7 product pairs) examined. The simple average tariff wedge (the difference in bound tariffs between the processed and primary products) for the seven product pairs was 14% for the EU, 59% for Japan and 5% for the US.

An UNCTAD/WTO joint study reveals that despite substantial trade liberalization under the Uruguay Round, the problem of high tariffs on products of export interest to developing countries is still widespread. study prepared jointly by the IMF and the World Bank (IMF-World Bank, 2001) notes that even though the Uruguay Round reduced tariff escalation for bound rates, such reductions in tariff escalation are not uniform.

A study on Swedish Agriculture has concluded that Tariff escalation is found both in developed and developing countries. The phenomenon is most obvious for products of which the raw material is not available within the country in question (such as coffee and cocoa in EU and Japan). Tariff escalation is most commonly used for fisheries than agricultural products judging by the studied products. Calculation of nominal tariff escalation underestimates the actual level of protection (ERP's) for the processing industry. According to E. Chevassus-Lozza and J. Gallezot emerging countries are denouncing the tariff escalation

practiced by developed countries as an obstacle to the development of their transformation industry. According to the study, by Jean-Christopher the dominant share of bulk commodities in Mercosur agro food exports to the EU is often seen as the evidence of tariff escalation in the EU . It is widely recognized amongst environmentalists in developing as well as developed countries that resource crunch is the single most important obstacle in the launching of programs to protect the environment. Tariff escalation makes matters worse. Tariff escalation is perceived as a source of environmental damage to exporting countries - a strain on environment. The Brundtland Commission's report defines sustainable development as the kind which seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future. Far from requiring the cessation of economic growth, it recognizes that the problems of poverty and underdevelopment cannot be solved unless we have a new era of growth in which developing countries play a larger role and reap large benefits. The meaning of sustainable development not only takes into account environmental protection, it is also about human beings. Manifest in this is the imperative need of economic equity in the world to ensure-at the least-that people are not hungry in one part of the world, while overfed in another. After many rounds of trade negotiations, average tariffs on non-agricultural products have been significantly reduced. But relatively high tariffs still remain on some products in which developing countries are competitive and tariffs go up as the level of processing increases.

Some of the studies have examined tariff escalation in markets of both developing and developed countries.

Tariff Escalation: Wood Products in Developing Markets

Source;UNCTAD, 2007 (applied tariff rates)

The above graph illustrates the post-Uruguay Round tariff levels of wood products by main developing regions. Several conclusions can be made. While the main focus is still on the tariff escalation, the overall level of applied tariffs is

dramatically higher compared with industrialized regions. The existence of escalation is very strongly demonstrated. In the two Asian sub-regions, the semi-finished tariff rates are lower than for raw materials or for finished goods.

Tariff peaks and tariff escalations effectively peg developing countries to the bottom end of the value chain and force them to continue to continue as primary commodity exporters thereby denying them the advantages of value addition. For developing countries attempting to diversify and up-grade their exports from raw agricultural commodities to processed food products, one of the most often-mentioned difficulties is that of tariff-escalation.

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Tariff escalation prohibits diversification and increases dependency on Primary sector- -Tariff escalation has been a major concern for developing countries, which fear that it may inhibit their efforts to industrialization. Moreover, global trade in the processed products has been growing relatively faster than in primary products. It effectively limits the scope for processing of agriculture and labour-intensive products in exporting countries. An escalating tariff structure creates greater protection for the processing sector in the importing country. For exporters, on the other hand, this acts as a disincentive for exporting processed products. For this reason, tariff escalation is seen as one of the impediments for developing value-adding, processing industries. By reducing demand for more processed imports from developing countries, tariff escalation hampers the expansion of their processing industries, and hence the means of accumulating skills and capital, and export

diversification. Also, the concentration of exports in less processed commodities often results in slower export growth (because of slower growth in demand for these products in industrial and high-income developing countries), low value-added in production, and greater exposure to the risk of commodity price volatility. Tariff escalation means that the global industrial structure and distribution of the processing industry are affected by the tariff structure of various countries instead of by the comparative advantage of those countries. A consequence of this is that production can take place at a higher cost and with a greater use of resources than what would have been the case without tariffs.

The existence of tariff escalation in agricultural markets is regarded as one of the major factors that hinder export growth and diversification and sustainable development in the exporting countries industries. The issue of tariff escalation in agricultural products is gaining more importance given the fact that growth in agricultural trade is shifting more to processed products. Countries with high dependence on commodity exports have a strong interest in this matter as they are trying to escape from the circle of producing and exporting primary products. This is a real problem for development, because tariff escalation in agricultural processed products encourages developing countries to export their raw commodities without adding any value. It is therefore very difficult to exploit the dynamics of industrialization and development that accompany the processing of agricultural commodities. Exports of processed agricultural commodities generate more income and employment opportunities through increased volume of trade, better prices, and more value-added activities related to the products and thus contribute significantly to economic growth in exporting countries. Tariff escalation and other trade barriers, however, often keep developing countries from benefiting from this trend and force them to continue to be providers of raw products. The sources of most raw materials are bound to be exhausted sooner or later if a country fails to develop a strong manufacturing base. Over-depletion of natural resources has serious environmental consequences. Dependence on the export of raw materials often puts a country at the mercy of unpredictable climatic conditions. Foreign exchange earnings are thus subject to

lot of uncertainty. Even favourable climate in a particular year, leading to a great harvest, can harm a country by drastically reducing the world price of the particular crop; and value added is lowest in raw materials. Therefore, if most of the economic activity of a country is centered on that sector, the rate of growth of its income is bound to slow down.

Developing countries also face significant tariff escalation. Tariff escalation is particularly prevalent in tropical raw products such as coffee, tea, meat, hides and skins, fruits, cocoa and sugar. According to UNCTAD, these Non Tariff Barriers doubled in the period 1994-2004, and there has been a sevenfold increase in testing and certification requirements since the conclusion of the Uruguay Round. Some countries see the opportunity to gain greater market access by improving product standards.

Tariff Escalation and the Balance of Trade - Any manipulation of tariffs rates is bound to affect the trade balance by changing the relative price between traded and non-traded goods. In fact, in principle, the practice of tariff escalation goes back to the days of colonial imperialism. Colonial imperialism created a scenario where, in stage one, the centre used to import raw materials from the peripheries. In stage two, these raw materials were processed into industrial products at the centre. In the final stage, the industrial products were exported to the peripheries themselves. Since the price of the raw materials that the peripheries exported was not commensurate with the price of the manufactured goods that they were forced to import, enormous amounts of gold and other precious metals found their way out of the peripheries and into the coffers of the centre. In modern day lingo, this reflects nothing but a severe balance of trade deficit for the peripheries. Thus, one of the major motivations behind imposing the colonial pattern of trade was to boost the trade surplus of the centre. The existence of tariff escalation results in "third-best" allocation of global resources, and when it is true that the removal of tariff escalation will result in improvement of trade balance of developing as well as developed countries.

Tariff escalation and Environment-There are many possible ways in which tariff escalation may hurt the environment. First, if a country is forced to

export primary goods alone, it is likely to cause over-depletion of natural resources and disturb the ecological balance of the region. Second, the slower rate of growth of income will leave less resource available for efficient environmental management in developing countries. Third, not only does it result in inequities in world trade, but also undermines the novelty of the notion-growth with equity. Fourth, if processing is only done in developed countries, it may be carried out with relatively capital intensive techniques (and hence, misallocation of resources), compared to developing countries where the level of mechanization is generally lower. Furthermore, tariff escalation prevents specialization according to natural comparative advantage. The basic postulate of international trade theory is that world income is maximized when countries produce what they are best at, i.e. where they have a comparative advantage. From this basic postulate tariff itself is distortionary, and by definition, reduces total income by pushing the global economic system into the "second-best" world (global allocation of resources). An escalated tariff structure is even worse, for it results in so-called "third-best" allocation of resources. In short, when countries defy the natural forces of comparative advantage, income and hence welfare is reduced, for developing as well as developed countries

Tariff escalation and WTO- Tariff escalation has been raised as one of the important market access issues in the current WTO negotiations on agriculture. While tariff cuts have been quite significant, there are two caveats to bear in mind. First, the Agreement on Agriculture only requires Member countries to reduce their tariffs on a simple average by 36 %, as long as a minimum reduction of 15 % is applied for each tariff line. The impact of the UR on tariff escalation, therefore, depends upon the structure of tariff commitments by Member countries. Second, changes in nominal tariff wedges between primary and processed commodities do not fully explain how tariff escalation affects the location of processing industries. Similar examples of tariff escalations exist among many other commodity sectors, including coffee and oilseeds. Tariff escalation has been a major concern for developing countries, which fear that it may inhibit their efforts to industrialization. It was expected that the commitments in the Uruguay

Round (UR) will provide for gradual reduction of escalation by applying relatively higher cuts to finished goods. However, the tariff escalation has continued after the UR in large number of sectors. In the UR although the average tariffs of different countries have declined, it has been noticed that problem of high tariffs is prevalent.

End-Uruguay Round average bound tariffs on primary and processed products

A positive TW indicates tariff escalation, and a negative TW tariff de-escalation, in percentage points. Source:World Trade Organization (2007), World Trade Report 2007, Geneva: WTO

The above table presents summary picture of the situation facing developing country exports of selected industrial products to the developed countries. Two features are evident at this level of aggregation: First, developed country tariffs, averaged over all industrial products, were subject to escalation before the Uruguay Round tariff cuts, and in most (but not all) instances will remain so after the cuts; Second, there have been greater absolute reductions in average tariffs at more advanced stages of production than the earlier stages of production. For natural resource-based products, for example, the average tariff applied to semi-manufactures has been reduced to the same level as raw materials (2 per cent), the new average tariff applied to semi-manufactures has been reduced to the same level as raw materials (2 per cent), and while the new average tariff applied to finished natural resource-based products remains above that on semi-manufactures (5.9 compared with 2.0 per cent), the tariff wedge is smaller (3.9 per cent compared to 4.4 per cent).

In the UR although the average tariffs of different countries have declined, it has been noticed that problem of high tariffs is prevalent Three post-Uruguay Round studies by Cernat L , the U.S. International Trade Commission and Lindland attempted to measure the extent of tariff escalation by identifying various processing chains and examining whether tariffs increase as products undergo increased processing. All three studies concluded that tariff escalation was a significant problem in agricultural trade, particularly for vegetable oils, beef, eggs, cereal products, and tobacco products.

Methodology

One of the ways of measuring whether or not the processing industry is protected or taxed by the tariff structure is to calculate ERP. The effective rate of protection is defined as the increment in value added made possible by the tariff structure as a proportion of the free trade value added. This method says how much the value-added of a product increases or decreases (in per cent) because of the tariff structure and other measures affecting trade

$$ERP = (V' - V) / V$$

where,

ERP = Effective Rate of Protection

V' = Value Added with tariff

V = Value added with free trade

If under free trade a good which sells at \$100 uses imported inputs worth \$50, the domestic value added is \$50. If a 10 per cent tariff is imposed on imports of this good, the nominal tariff rate is 10 per cent. If the imported inputs remain free of duty, the effective rate of tariff protection will be 20 per cent since the good produced domestically can now sell at \$110, which represents an increment of \$10 on free trade value added of \$50. The effective rate exceeds the nominal rate because the 10 per cent effectively applies to only half the inputs into the good, namely those which are supplied domestically. It is possible for the effective protection rate to be negative, if the imported inputs are subject to higher rates of duty than the final good. More generally, effective rates of tariff protection will be higher than, equal to or lower than nominal duties, depending on whether nominal duties on the final product exceed, equal or fall short of those on material inputs. The difference in effective and nominal rates of protection further depends on the share of value added in output. It aims at actually measuring the degree of protection. The difficulty is however that this method requires a good supply of data on prices & production. The ERP takes into account how tariffs affect the value-added of the processed commodity.

It is defined as the change in value added, made possible by the tariff structure, as a percentage of the free trade value :

$$ERP = VAFT \text{ and } VAT > 0$$

where,

VAFT = Free trade value added (in absence of tariffs)

VAT = Value added in presence of tariffs

The ERP can be explained by three examples of wheat flour processed from import POSITIVE ERP

If wheat flour sells at 250 \$/MT in the world market, and the wheat necessary to produce one MT of wheat flour costs 200 \$, the VAFT (ignoring other inputs) per MT of wheat flour is 50 \$. Supposing that a tariff of 10 % is imposed on wheat flour while the imported wheat remains free of duty, wheat now sells at 275 \$/MT and the VAT per MT of wheat flour equals 75 \$. Whereas the TW amounts to 10 %, the ERP will be $100 \times (75 - 50) / 50$ which is 50 %. This means that, with the given prices, the free trade value added of wheat flour can be increased by 50 % when tariffs of zero and 10 % are imposed on respectively wheat and wheat flour. If ERP is positive, this means that value-added of this particular process is higher than it should have been in case of free trade. This means that returns on labour, capital, land etc. are higher than in a situation without tariffs, which stimulates increased production.

Negative ERP

The introduction of tariffs results in a decrease in the free trade value added ($ERP < 0$). If wheat flour of the example above remains free of duty while a tariff of 10 % is imposed on wheat, the TW would be -10 % (nominal tariff de-escalation). The cost of wheat necessary to produce one MT of wheat flour will now increase to 220 \$/MT, and the VAFT will decrease to 30 \$/MT of wheat flour. In such a case the ERP will be $100 \times (30 - 50) / 50$ which is - 40%. If ERP is negative, the processing industry is implicitly taxed. By using ERP, different production processes can be ranked by how much they benefit from the existing tariff structure. In the long run, the ranking of different processes affects the distribution of economic resources within the country.

ERP Equal to Zero

Finally, the introduction of tariffs might have no impact on the free trade value added ($ERP = 0$).

Using the prices above and tariffs of 10% and 12.5% imposed on respectively wheat flour and wheat, the ERP will be $100 \times (50-50)/50$ which is 0%. Finally, equation (1) can be used to calculate the base and bound ERPs. The impact of the UR on tariff escalation is simply measured by

$$(2) \text{ ?ERP} = \text{ERP}_{\text{bound}} - \text{ERP}_{\text{base}}$$

where,

?ERP = The change in the Effective Rate of Protection due to the UR

ERP base = The ERP of equation (1) using base period tariffs

ERP bound = The ERP of equation (1) using bound tariffs of year 2000, the final year of the implementation period. Thus the higher the degree of tariff escalation, the greater is the effective rate of protection enjoyed by the final-good industry, i.e. for TW greater than zero ($T > t$), the ERP will be positive and greater than the nominal tariffs on output. This can be illustrated by examples of green coffee (denoted by A) and roasted coffee (denoted by B). Assuming a_{ij} of 0.6, a tariff of 20 per cent on product B and 10 per cent on A will result in ERP of 30 per cent. However, a 20 per cent tariff on product B and a zero tariff on A will result in ERP of 50 per cent.

The effective rate of protection is used to estimate the protection really afforded to domestic producers at each stage of production, i.e., how much extra they can charge and still be competitive with imported goods. If the total value of the tariffs on importable inputs exceeds that on the output, the effective rate of protection is negative, i.e., the industry is discriminated against in comparison with the imported product.

In this context, it does not matter whether the final product or the inputs used to make it were actually imported or not. What is important is that they are importable. If so, the implied tariffs should be included in the above formulas because, even if the item was not actually imported, the existence of the tariff should have raised its price in the local market by an equivalent value. The effective rate of protection reveals the extremely adverse effect of tariffs that escalate from low rates on raw materials to high rates on intermediate inputs and yet higher rates on the final product as, in fact,

most countries' tariff schedules do. Less developed countries complain that such tariff schedules gravely impede their access to developed countries' markets. It cites a recent UN Food and Agriculture Organization (FAO) study which shows that tariffs and tariff escalation will present an important problem for diversifying exports of developing countries. While food exports are a major export industry of the developing world, the exports are largely concentrated in the first stage of processing, and more advanced processed products account for only 5% of agricultural exports of LDCs and 16.6% for developing countries as a whole, as against 32.5% for the developed countries. According to the FAO, tariff escalation is probably one of the major constraints to vertical diversification of agricultural products by developing countries. The UNCTAD/WTO study, in examining the ERPs in the production chain - from raw materials, through successive stages to the final consumer product - in leather goods and cotton shirts, points to some methodological problems of estimation because of difficulties in translating estimated magnitudes into trade and resource allocation effects as well as data problems for input/output coefficients. Subject to these caveats, the study finds ERPs are relatively low for the final stage of shoe production in the EU and US - with 9 and 12% respectively. But ERP for men's leather shoes reaches 32% in Canada and 28% within the tariff quota in Japan and 260% for MFN rates above the tariff quotas. The study also finds no homogenous pattern of increase of effective protection by stages in the shoe industry. Effective protection doubles in the US and Canada from the stage of the leather industry to that of footwear production - from 7 to 12% and 15 to 32% respectively. It rises even more steeply in Malaysia from 16 to 44%. But about the same level of protection is accorded in South Korea. In the EU, protection is more pronounced for the leather industry than for shoe production. The non-linearity of effective protection along with the processing chain is even more pronounced for cotton shirts. Effective protection ranges from 7% in Japan and 35% in the US (among developed countries), 20% in South Korea and 38% in Malaysia. Effective protection is relatively high at the first stage of entry to industry. Spinning is protected at rates of 25 and 28% in US and Canada, 40% in South Korea, and

almost 70% in Malaysia - and compared to 14% in the EU and only 6% in Japan. ERPs for the weaving stage are relatively low and fairly similar.

Conclusion- Tariff escalation has been the subject of a long drawn out war between developed and developing countries because the tariff structures of the former have historically displayed significant escalation favoring their domestic producers in the "processed" stages of a large number of sectors. Tariff escalation biases protection in both developed and developing countries against agricultural and labor-intensive products. This holds back export-led growth and greater diversification in developing countries. The issue of tariff escalation in agricultural products is gaining more importance given the fact that growth in agricultural trade is shifting more to processed products. Countries with high dependence on commodity exports have a strong interest in this matter as they are trying to escape from the circle of producing and exporting primary products. The existence of tariff escalation in agricultural markets is regarded as one of the major factors that hinder export growth and diversification and sustainable development in the exporting countries. Tariff escalation prevents developing countries from moving away from dependence on a few commodities. Tariff peaks and tariff escalation must be brought down by the negotiations, if developing countries are to be able to meaningfully gain from world merchandise trade. Transforming market access opportunities into concrete gains will also depend on the willingness of countries to implement reforms at home to enable their firms to take advantage of market openings abroad. Therefore, tariff escalation still represents a significant problem for those countries trying to diversify their exports. As a trade barrier, tariff escalation is becoming more and more of an issue since trade is rapidly shifting to processed products. Furthermore, this is also a major obstacle for developing countries interested in escaping from the cycle of producing and exporting primary products and earning less and less given the deteriorating terms of trade for primary commodities. The impact of further reduction of agricultural tariffs on tariff escalation will depend a great deal on the method to be used

in reducing tariffs. Most of the country proposals addressing tariff escalation are suggesting the adoption of a harmonizing reduction formula that reduces higher tariffs by greater amounts, including tariff peaks, and eliminates tariff escalation.

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