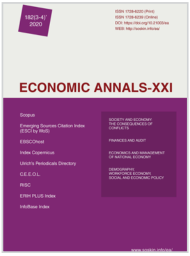

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The impact of local armed conflicts on the economic performance of countries in 1990-2019

Abstract. Despite the studies of the impact of wars on the local economies of countries and empires, the armed conflicts of the 20th century have their own specifics, different objectives and intensity, which affects not only the economic performance of enterprises and the country as a whole, but also the migration of population and investment attractiveness of the country. Studies based on armed conflicts in Latin America, civil wars in African countries as well as Iraq and Syria differ significantly from the effects of modern armed conflicts on micro- and macroeconomic levels. In the process of unfolding an armed local conflict, the investment attractiveness of the country gradually drops from A+ (for developed countries) and B (for developing countries) to CCC-, warning investors to invest in the declining economy of the country. The aim of the paper is to consider armed conflicts in the period from 1990 to 2019, including armed clashes, civil and international wars; and their impact on the economic performance of the country, both at the beginning of the conflict itself and in its middle.
Keywords: Local armed conflict; Economic performance; Impact
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Вплив локальних збройних конфліктів на економічні показники країн у період 1990–2019 рр.
Анотація. Незважаючи на дослідження впливу воєн на локальні економіки країн та імперій, збройні конфлікти 20 и 21 століття мають свою специфіку, різні цілі й інтенсивність, що позначається не тільки

на економічних показниках підприємств і країни в цілому, а й на міграції населення й інвестиційній привабливості країни. Дослідження, засновані на збройних конфліктах у Латинській Америці, громадянських війнах в Африканських країнах, а також Іраку і Сирії, істотно відрізняються від вивчення наслідків сучасних збройних конфліктів на мікро- та макроекономічних рівнях. У процесі розгортання збройного локального конфлікту інвестиційна привабливість країни, її кредитний рейтинг поступово падає від А (для розвинених країн) і В (для країн, що розвиваються) до ССС-, застерігаючи інвесторів вкладати гроші в падаючу економіку країни. Мета статті полягає в розгляді збройних конфліктів у період 1990–2019 років, серед яких – збройні зіткнення, громадянські й міжнародні війни та їх вплив на економічні показники країни як на початку розгортання самого конфлікту, так і в його середині.
Ключові слова: локальний; збройний конфлікт; економічні показники; вплив.

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Влияние локальных вооруженных конфликтов на экономические показатели стран в период 1990–2019 гг.
Аннотация. Несмотря на исследования влияния войн на локальные экономики стран и империй, вооруженные конфликты 20 и 21 века имеют свою специфику, различные цели и интенсивность, что влияет не только на экономические показатели предприятий и страны в целом, но и на миграцию населения и инвестиционную привлекательность страны. Исследования, основанные на вооруженных конфликтах в Латинской Америке, гражданских войнах в Африканских странах, а также Ираке и Сирии, существенно отличаются от последствий современных вооруженных конфликтов на микро- и макроэкономических уровнях. В процессе разворачивания вооруженного локального конфликта инвестиционная привлекательность страны, ее кредитный рейтинг постепенно падает от А+ (для развитых стран) и В (для развивающихся стран) до ССС-, предостерегая инвесторов вкладывать деньги в падающую экономику страны. Цель статьи заключается в рассмотрении вооруженных конфликтов в период 1990–2019 годов, среди которых – вооруженные столкновения, гражданские и международные войны и их влияние на экономические показатели страны как в начале разворачивания самого конфликта, так и в его середине.
Ключевые слова: локальный вооруженный конфликт; экономические показатели; воздействие.

1. Introduction

A comparative analysis of the majority of military conflicts (inter-state and civil) in the period 1990-2019 shows an obvious decrease in the level of GDP per capita after the end of the conflict. The dynamics of the decline in this indicator ranges from 0.5 to 64.3%.

And if the model, for example, identifies conflicts that exceed five years in duration (Burundi, Sierra Leone, Algeria), then the annual decline in the indicator will be 1.8-2.7%, which is close to Collier's conclusion. From this we can make an assumption: due to the duration of the armed conflict, the country's economy adapts and compensates for losses that are typical for conflicts lasting up to two years.

An analysis of five additional macroeconomic indicators in some countries with military conflicts shows similar trends.

Against this background, the conflict in Chad is significantly different. This is due to the fact that after the battle of N'Djamena in 2008, the war became a positional one without the use of aircraft and heavy equipment. The localization of fighting in the area of the Chadian-Sudanese border allowed the Chadian economy to adapt and demonstrate growth.

2. Brief Literature Review

Despite numerous studies of the impact of the First and Second world war on national economies, local armed conflicts and civil wars of the modern period have different specifics, tactics and intensity, which respectively affects their economic consequences (Barro, 2013).

The conclusions of individual studies based on local conflicts of the 1980s in Latin America are now outdated and differ significantly from the impact of modern conflicts (Cederman, 2017).

British Professor Paul Collier proved that the estimated cost of the civil war is 2.2% of GDP annually due to the effect of reducing economic growth (Bolt, 2013). And if the average civil war lasts seven years, then at the end of the war, the country's economy will be 15% lower than before the war (Clifford, 2017).

The GDP indicator is affected by the consequences of the armed conflict: the destruction of production facilities, infrastructure, transport, loss of the ability to use land as a result of shelling, mining, and pollution (Comin, 2008). In addition, the departure of labor from the territory of the country, civilian casualties have a side effect on this indicator (French, 2014).

Even in the case of internal migration of labor resources from the zone of armed conflict with employment in a new place, the negative impact on the GDP level remains due to the destruction/shutdown of enterprises or loss of control over them in the conflict zone (Jorda, 2014). Thus, internal migration in conflict conditions increases employment in certain regions, but the negative impact on the national economy persists due to the reduction of jobs within the state due to victims or emigration (Marshall, 2017).

A comparative analysis of the majority of military conflicts (inter-state and civil) in the period 1990-2016 shows an obvious decrease in the level of GDP per capita after the end of the conflict (Neilsen, 2013). The dynamics of the decline in this indicator ranges from 0.5 to 64.3%.

And if the model under consideration identifies conflicts that are longer than five years (Burundi, Sierra Leone, Algeria), the annual decline will be 1.8-2.7%, which is close to Collier's conclusion (Reher, 2004). Thus, we can assume that as a result of the duration of the armed conflict, the country's economy adapts and compensates for losses that are typical for conflicts lasting up to two years (Scnheider, 2006; Schon, 2012; Stiglitz, 2009; Van Zanden, 2014; Weidenmier, 2007).

3. Purpose

The main purpose of the article is to study the impact of wars on the country's economy as a whole and on industry enterprises in the period 1990-2019, including civil wars in Rwanda, Burundi, DRC, Guinea-Bissau, Sierra Leone, Mali, Libya, Serbia, Tajikistan, Syria etc.

4. Results

British Professor Paul Collier proved that the estimated cost of the civil war is 2.2% GDP annually due to the effect of reducing economic growth. And if the average civil war lasts seven years, then at the end of the war, the country's economy will be 15% lower than before the war (Bolt, 2013).

The GDP (gross domestic product) indicator is affected by the consequences of armed conflict: the destruction of production capacities, infrastructure, transport, loss of the ability to use land as a result of shelling, mining, and pollution. In addition, the movement of labor across the country and civilian casualties have an indirect impact on this indicator (Clifford, 2017).

Even in the case of internal migration of labor resources from the zone of armed conflict with employment in a new place, the negative impact on the GDP level persists due to the destruction/shutdown or loss of control over enterprises in the conflict zone (Table 1). Thus, internal migration in conflict conditions increases employment in certain regions, however, its negative impact on the national economy persists due to the reduction of jobs within the state through victims or emigration.

The cost to the government. In almost all cases analyzed (78%), armed conflicts led to an increase in government spending per capita (Table 1). This is due to the fact that the beginning of an armed confrontation increases the cost of security and defense, as well as the repair and restoration of infrastructure, which is destroyed as a result of hostilities (Comin, 2008). Wars and other armed conflicts in the world with different magnitude in 1946-2016 are presented in Figure 1.

Comparative analysis shows that there are exceptions, such as Serbia, where the rate fell during the conflict due to a population decline of 300,000 inhabitants, and comprehensive international sanctions that were imposed in 1991 and lifted only in 2001 (French, 2014). But after the 1999 NATO operation, government spending more than doubled. Therefore, the conflict in Serbia still led to an increase in government spending, but after the lifting of sanctions.

A similar pattern can be observed in the case of Iraq, where comprehensive international sanctions were imposed in 1990 and lifted in 2003 (Jorda, 2014). Serbia and Iraq are the only countries that show a decline in government spending during the conflict. This effect only works in the event of the imposition of comprehensive sanctions and does not apply to the imposition of sanctions on the supply of weapons, restriction of entry or in the form of freezing of assets. Accordingly, the deterrent effect of sanctions pressure on government spending, although

Table 1:
Changes in GDP per capita in some armed conflicts from the beginning to the end of the armed confrontation

	GDP per capita, USD, before	GDP per capita, USD, after	Aggregate change, %	Average change for the year, %
Rwanda, 1990-1994	367	230	-37.32	-9.33
Burundi, 1993-2005	184	144	-21.73	-1.8
DRC, 1997-1999	212	64	-69.81	-34.9
Guinea-Bissau, 1998-1999	388	311	-19.84	-9.9
Sierra Leone, 1991-2002	214	150	-29.91	-2.7
Sudan, 2012	739	715	-3.24	-3.2
Libya, 2014-2019	13.400	6650	-50.37	-50.3
Serbia, 1999	2441	870	-64.35	-64.3
Tajikistan, 1992-1993	503	154	-69.38	-34.6
Algeria, 1991-2002	2359	1743	-26.11	-2.37
Chad, 2005-2010	586	736	+15.59	+3.12
Iraq, 2003	691	637	-7.8	-7.8
Yemen, 1994	348	346	-0.57	-0.5
Georgia, 2008	2900	2446	-15.65	-15.6
Turkish invasion of Iraq, 2015-2016	234.65	175.15	-24.26	-13.1
Iraq conflict, 2017	175.15	195.47	+11.60	+11.60
Syria, 2016-now	60.2	16.6	-74.2	-11.21

Source: Formed by the authors based on data by Clifford (2017), French (2014), international statistical databases

there is no doubt, turns into an increase in this indicator immediately after the lifting of such sanctions (Marshall, 2017).

Internal and external investments. The armed conflict affects both domestic and foreign investors. Depending on the intensity of the conflict, they move capital abroad or transfer production capacity to other regions of the country.

The factor of capital withdrawal remains relevant in both scenarios of domestic investors' behavior as a possibility to preserve capital in conditions of uncertainty and uncertainty of the future national market. At the same time, the greater the probability of spreading a war zone and/or external aggression, the greater the insurance of investment capital abroad.

Domestic investment is one of the most sensitive indicators before armed conflicts. The outbreak of armed conflicts has a negative impact on both financial and real investments. This is due to the fact that stock markets and securities markets in the conflict country react instantly to the

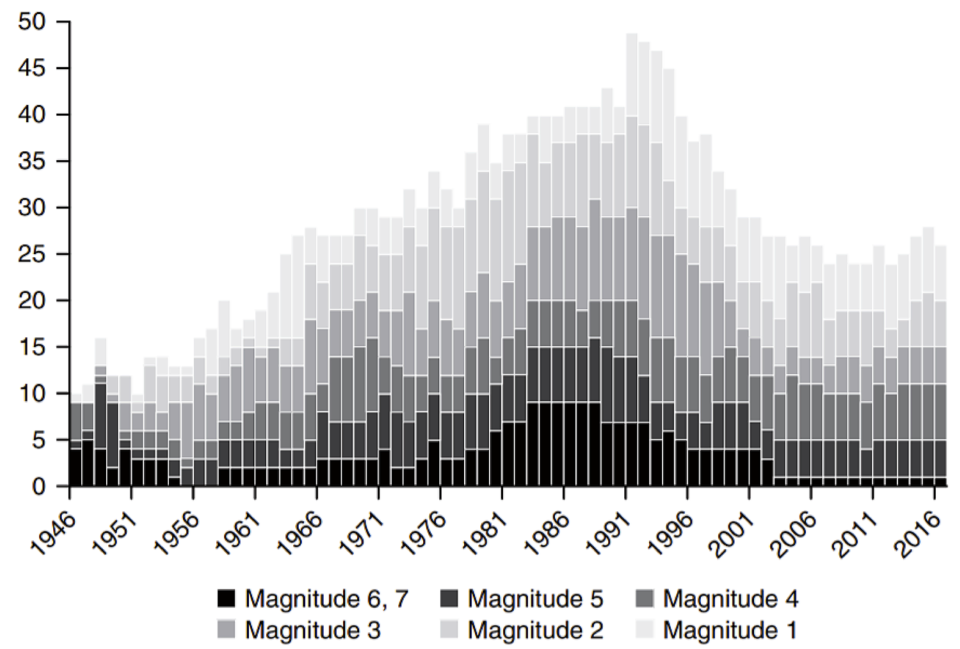

Figure 1:
Wars and other armed conflicts in the world, 1946-2016
Source: Data by the Center for Systemic Peace

conflict, and investment in capital construction is suspended due to high risks, especially if the objects of such investment are located in a war zone. At the same time, investors refrain from investing in the development of production due to uncertainty in the future (Neilsen, 2013).

In Chad, the territorial concentration of fighting did not affect the core regions of investment and economic activity (Reher, 2004). In the Yemeni conflict, the unification of North and South Yemen with the elimination of the socialist mode of economy in the South allowed to give a strong boost to the development of the United country's economy (Scheinder, 2006).

The transition to a capitalist form of social order had such a strong effect that the civil war (April-July 1994) could not significantly affect the volume of domestic investment. The political changes that occurred after the suppression of the «South» in the second half of 1994, the liquidation of the socialist party allowed to expand access to investment projects and facilities (Schon, 2012). This explains the difference between the Yemeni case and the General trend of declining domestic investment due to armed conflicts.

As a result, the drop in domestic investment was 11% in the year following the end of the conflict, 27.1% in Tajikistan, and 57.6% in Georgia (Schon, 2012).

These examples prove a direct link between armed conflict and a decline in domestic investment. An increase in the negative impact on the volume of domestic investment occurs due to the occupation or occupation of a certain territory, which breaks the economic and investment ties between territories within one state and affects national statistics.

This is especially noticeable in cases where a direct investor finds himself in a zone of occupation or conflict and is forced to stop investing or change its geography. At the same time, if the investor remains in the territory controlled by the government, the negative effect is significantly reduced, as there is a change in the objects or geography of investment within the country and funds continue to be recorded in the national statistics of internal investment.

The behavior of external investors and, consequently, the reaction of the foreign direct investment (FDI) indicator differs radically from the behavior of domestic investors. Interstate conflicts and wars lead to a decrease in investment volumes, which is twice as much as the similar effect of civil conflict. However, the analysis shows that in some cases, armed confrontation does not lead to curtailing investment. Based on the analysis, it can be concluded that, as a rule, the decline in FDI inflows occurs in the year following the conflict. It is in the first year of the confrontation that the future prospects of the market, the activity of the parties, the safety of the functioning of the business, and the possibilities of physical support for its protection are evaluated (Stiglitz, 2009).

Internal and external conflicts always have the risk of tipping over to neighboring countries. Even if the civil war is solely the result of internal processes, national investors may fear that the war will spread to their neighbors. As a result, investors often resort to withdrawing their investments from the country where the war is being waged, as well as from neighboring States.

Resource mobilization due to defense spending makes domestic and foreign investment more attractive. This conclusion is not related to defense spending directed at aggression.

There are two scenarios that do not include the devastating impact of conflict, in which the level of investment in countries in conflict will decrease. In the first of them, this happens against the background of a reduction in state revenues. As long as citizens interpret the conflict as temporary, they will spend money for consumer purposes, reducing the level of capital that can be directed to investment. In the second case, private investors are afraid of the risk of deterioration of the security situation and switch to other attractive opportunities that offer a greater level of security (Van Zanden, 2014).

In any case, it can be argued that local conflicts can have a limited impact on the availability of investment in cases where:

- the investor is able to physically protect them in the conflict zone;
- investments are directed to the territory that is not covered by the armed conflict, and there is a capacity for their physical protection in the event of expansion of the conflict zone;
- against the backdrop of armed conflict, there are positive changes in the investment climate (for example, the government is becoming loyal or has dropped Western investors, reforms are being implemented, a dictatorial or corrupt regime has been overthrown, and so on).

National currency. Armed conflicts affect the exchange rate of the national currency in all analyzed cases, except for Chad. In most cases, the depreciation of the national currency was significant. For example, Sierra Leone (92.8%), Algeria (92.3%), Serbia (83.7%), Rwanda (76.9%), Burundi (77.6%), and Yemen (70%) had the highest rates of devaluation of the national currency in the first year of the conflict. The lowest rates are in Mali (7.6%), Libya (11.9%), Georgia (10.8%), and the DRC (13.2%) (French, 2014).

The devaluation effect of armed conflict is caused by a set of reasons that are discussed in this article: destruction of infrastructure, reduction of export volumes, foreign direct investment, capital outflow, including banking, which leads to a deficit in the currency market, as well as - in cases of interstate conflicts - trade blockades or the breakdown of trade and economic ties.

Thus, the devaluation of the national currency is one of the permanent consequences of armed conflicts, regardless of the effect on all other macroeconomic indicators that are analyzed in the material. However, in most cases, devaluation is limited to a period of one to three years after the end of the conflict. The exception is cases when an armed conflict leads to significant destruction of infrastructure, loss of part of the territory with stable economic ties or significant casualties. As the analysis shows, the more vulnerable the consequences of the conflict for the economy of the state, the longer the devaluation of the national currency will continue.

Accordingly, we can conclude that the impact of armed conflict on the devaluation of the national currency of the conflict country depends on how destructive such a conflict is for the state's economic system, how quickly its consequences can be overcome or compensated, for example, at the expense of other markets.

Indicators of external debt. The results of the analysis indicate the impact of the military conflict on the external debt indicator. This impact is due to the outflow of foreign capital from the country where the fighting is taking place through investment risks, as well as the need to borrow money for both defense spending and infrastructure reconstruction after the fighting. In addition to the outflow of foreign capital, the armed conflict negatively affects the readiness of foreign capital to invest.

The analysis proves that in the first year of the conflict, there is an increase in external sovereign debt. However, in the future, this indicator behaves differently directed and, most likely, is determined by the impact of the conflict on the economy, investments and external assistance to the state affected by the conflict and duration of conflict and intensity of conflict (Xu, 2008).

In addition, armed conflict in many cases leads to a reduction in development assistance programs, which requires compensation for needs by increasing sovereign borrowing (Table 2).

Household expenditures. The analysis shows that armed conflicts in almost 80% of the cases considered lead to a reduction in household spending. This indicator is closely related to the trend of declining consumer spending as a result of such conflicts.

The reduction in the number of households occurs both through the destruction of infrastructure facilities, and because refugees and internally displaced persons either leave the country or settle in such a way that they do not create new households (for example, in refugee camps or with relatives). Also, the reduction in household spending can be a consequence of job losses, both through the destruction of business infrastructure and through the outflow of investment.

As the number of households decreases, so does the level of consumption. Consumer spending is formed at the expense of household spending on current consumption, spending on

Table 2:
Change in external debt as a result of the armed conflict, USD billion, 2019

	External debt to conflict	External debt for the year since the beginning of the conflict
DRC	302	344
Burundi	114.7	123.4
Rwanda	28.0	127.4
Guinea-Bissau	362.9	504.5
Sierra Leone	176.6	229.6
Small	23	25.6
Libya	5.8	6.3
Serbia	60.01	176.9
Tajikistan	23.6	44.3
Algeria	46.9	65.5
Chad	28.9	28.3
Iraq	62.2	120
Yemen	12	40
Georgia	29	61
Turkey	300	146.2
Syria	3	10

Source: Formed by the authors using data by World Bank (2019) durable goods and spending on services. Based on the results of the analysis, it can be argued that during armed conflicts, a reduction in consumer spending leads to a reduction in household spending on current consumption and services. Depending on the intensity of the conflict, the coverage area, the General level of welfare of the population, and ethnic specifics, the impact of the conflict on spending on durable goods may differ (Zanger, 2000).

In most cases, especially in poor countries, armed conflicts reduce this macro indicator. Thus, the armed conflict in Tajikistan in 1992-1993 led not only to a reduction in household spending, but also to a reduction in consumer spending from USD 346 per capita to USD 145 (-51.8%) (French, 2014).

Although a declining trend has been observed in Tajikistan since 1991, analysis of other countries shows that there is a correlation between armed conflict and declining consumer spending. For example, the conflict in the DRC led to a drop in consumer spending from USD 200 per capita in 1997 to USD 61.8 in 1999 (-69.1%). It should also be noted that in many cases, the reduction in consumer spending was a factor in the beginning of armed conflicts, and therefore preceded the conflict. Thus, we can conclude that despite the fact that a reduction in consumer spending precedes the conflict, or is a consequence of it, this indicator accompanies the armed confrontation (French, 2014).

Export. In most of the cases analyzed, armed conflicts affected a decline in exports. This is due to the destruction of export capacities, cross-border restrictions on the movement of goods (in inter-state conflicts), the trade blockade, as well as sanctions imposed. However, against the background of the General trend, you can see an atypical situation with export indicators in the conflict in Mali. This is due to the fact that the country's export capacities were located at a considerable distance from the war zone (in the South of the state), and the conflict zone itself was free of significant infrastructure.

Analysis of export indicators in long-term armed conflicts shows that the negative effect is relevant for commodity-based economies only during the first two years. After that, the export sectors adapt with the recovery of the growth trend. A typical example is Algeria, where exports fell by 11.8 per cent in the first year of the armed conflict, and 16.7 per cent in the second, after which they grew. During the following years, the dynamics changed accordingly of the situation at the fields: from -20.5% in 1998 to 56.4% in 2000 (French, 2014).

A similar picture can be seen in the second civil war in Chad, where outbreaks of fighting in the export capacity zone in 2007 and 2009 affected export indicators - a fall of 4.1 and 12.8%, respectively.

Thus, armed conflicts do not have a negative impact on export indicators only in cases of:
- when fighting occurs at a significant distance from the zone of concentration of export capacities;
- when the armed conflict lasts for a long time and export capacities have the ability to adapt to work in war conditions.

These conclusions are also true for Iraq. The increase in exports per capita is due to the increase in oil prices after the beginning of the invasion of the coalition forces. However, if we estimate the volume of exports for 2003 in constant prices in 1970, it will be obvious that exports decreased by 11.8%. This means that the increase in export indicators in this case was due to an increase in energy prices since the beginning of the operation of coalition forces in Iraq (French, 2014).

Import. In 71% of the conflicts considered during the analysis, there is a correlation between armed confrontation and a decrease in import indicators. The decline in imports in most cases is due to a drop in consumer demand and a decrease in the purchasing power of the population. Devaluation of the national currency, which usually accompanies an armed conflict, leads to an inflationary jump, primarily for goods of foreign origin. Usually, the consumption of imported products is focused on representatives of the middle class and affluent segments of the population, who are most sensitive to armed conflicts. They are among the first to leave the war zone, moving to other regions (the Donbass), or emigrate to other States (Syria, Libya). Thus, the departure of the middle class as a consumer of imported products from the conflict country also contributes to reducing the demand for imported goods and services (Nielsen, 2013).

The cyclical effect of conflict. In most cases, as world experience shows, poverty contributes to the emergence of conflicts. It is a motivation for many people to take an active part in hostilities and use the armed conflict as a means of earning funds. Armed conflict due to the destruction of infrastructure, casualties among military personnel and civilians (loss of breadwinners), the appearance of refugees and internally displaced persons contributes to the growth of poverty.

Thus, there is a certain cyclicality in the impact of poverty on the emergence of conflict and the growth of poverty as a result of conflict.

5. Conclusion

The dynamics of macro indicators in a lot of countries after 2014 corresponds to General trends in the behavior of the national economy in response to armed conflict.

At the same time, the specifics of the armed conflict on the territory of country, which has all the characteristics of an interstate conflict with the use and support of one state of armed formations on the territory of another state, allows us to draw conclusions about the possibility of increasing inflow of foreign direct investment. The situation with export indicators for Middle-East European countries as of 2019 is atypical, since the second half of the year should see an increase in exports.

Overcoming the impact of armed conflict can be achieved through reforms in the economic sector, improving the investment climate and the level of protection of investment and property rights. The government should pay attention to the risks of post - conflict trade imbalances, where imports show growth and exports show declines (case of Sierra Leone, Rwanda).

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