



The Impact of Oil Rent Dependence on Food Security in Libya: A Structural Analysis

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أثر الاعتماد على الربيع النفطي في الأمن الغذائي في ليبيا: تحليل هيكل

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Abstract:

Libya's experience with food security offers a telling example of how resource wealth can paradoxically undermine basic welfare outcomes. Despite more than six decades of oil revenues, the country remains heavily dependent on food imports, with local agriculture covering no more than a tenth of domestic consumption. This paper argues that this is not a temporary condition or a policy failure that can be fixed by better planning. Rather, it reflects a structural feature of the rentier economic model that Libya has followed since the 1960s. The analysis draws on three interrelated mechanisms: the displacement of agricultural investment by oil-related spending, the direct transmission of oil price fluctuations into food import costs, and the gradual erosion of institutional capacity for managing food security. The study concludes that without a fundamental shift away from oil dependence, food security will remain precarious regardless of short-term policy measures.

Keywords: Food Security, Rentier Economy, Libya, Oil Dependence, Structural Analysis.

الملخص

تقدم التجربة الليبية في مجال الأمن الغذائي مثالاً دالاً على الكيفية التي يمكن بها للثروة النفطية أن تقوض، على نحو متناقض، مستويات الرفاه الأساسية. فرغم أكثر من ستة عقود من إيرادات النفط، لا تزال البلاد تعتمد اعتماداً كبيراً على استيراد الغذاء، إذ لا يغطي الإنتاج المحلي أكثر من عُشر الاستهلاك. ترى هذه الورقة أن هذه الحالة ليست ظرفاً مؤقتاً أو إخفاقاً في السياسات يمكن تلافيه بتخطيط أفضل، بل هي سمة هيكلية للنموذج الاقتصادي الريعي الذي تتبناه ليبيا منذ ستينيات القرن الماضي. ويعتمد التحليل على ثلاث آليات مترابطة: إزاحة الاستثمار الزراعي بسبب الإنفاق المرتبط بالنفط، والانتقال المباشر لتقلبات أسعار النفط إلى تكاليف استيراد الغذاء، والتآكل التدريجي للقدرات المؤسسية اللازمة لإدارة الأمن الغذائي. وتخلص الورقة إلى أنه دون تحول جوهري بعيداً عن الاعتماد على النفط، سيظل الأمن الغذائي هشاً بغض النظر عن أي تدخلات سياسية قصيرة المدى.

الكلمات المفتاحية: الأمن الغذائي، الدولة الريعية، ليبيا، الاعتماد على النفط، تحليل هيكل

Introduction

There is a certain irony in Libya's food situation. A country that sits on Africa's largest proven oil reserves finds itself unable to feed its population without relying heavily on foreign suppliers. According to official figures, Libyan agriculture meets no more than 10% of domestic consumption, with the remainder imported from

international markets (The Libya Observer, 2025). This is not a new development. It has been the pattern for decades, surviving changes in government, shifts in policy direction, and periods of both stability and conflict.

The question that arises is straightforward: why does a country with substantial financial resources remain so vulnerable to food supply disruptions? I would suggest it lies not in any single policy choice but in the structure of the economy itself. Oil has been the dominant sector since commercial production began in the early 1960s, and this dominance has shaped every other sector, including agriculture, in ways that are not easily reversed.

What makes this worth examining is that Libya is not unique. Several oil-exporting countries face similar patterns of import dependence and vulnerability to price volatility. Yet the Libyan case is particularly instructive because the degree of dependence is so extreme and because the political fragmentation of recent years has made the underlying structural problems more visible than they might otherwise be.

This paper seeks to examine the relationship between Libya's oil-based economy and the chronic fragility of its food security. The argument is developed through three mechanisms. First, the availability of oil revenues has consistently reduced the incentive to invest seriously in agricultural development. Second, the fluctuations in oil prices create corresponding fluctuations in the country's capacity to finance food imports. Third, the institutional apparatus required to manage food security proactively has never properly developed because the rentier model substitutes distribution for governance.

The discussion proceeds as follows. The next section reviews the relevant theoretical literature on rentier states and food security. Section three presents the analytical framework. Section four applies this framework to the Libyan case. Section five draws together the implications and offers concluding reflections.

2. Conceptual Background

2.1 The Rentier State Concept

The notion of the rentier state has been central to understanding the political economy of oil-exporting countries since the work of Beblawi and Luciani in the 1980s. In their formulation, a rentier state is one in which the government derives a substantial portion of its revenue from external sources, in this case, oil exports, rather than from domestic taxation or productive activity (Beblawi, 2016). This has significant consequences. When a state does not need to collect taxes from its citizens, the relationship between state and society is fundamentally different. Citizens become recipients of state distributions rather than taxpayers with claims on state accountability.

Luciani (2016) developed a useful distinction between 'allocation states' and 'production states.' In an allocation state, the primary function of government is to distribute externally generated income. In a production state, the government's role is to extract value from domestic economic activity. This distinction matters for food security because an allocation state tends to see food as something to be bought and distributed, while a production state tends to see food as something to be grown and managed.

This theoretical perspective has been extended and refined by subsequent scholars. Schwarz (2008), for instance, examined how rentier structures shape economic reform trajectories across the Middle East, concluding that the absence of domestic taxation reduces state accountability and, by extension, diminishes the responsiveness of agricultural policy to societal needs. Yates (1996), in a comparative study of African rentier economies, similarly observed that oil dependence tends to crowd out productive investment across all non-oil sectors, with agriculture being particularly vulnerable because its returns are slower and less politically visible than those of other sectors. McLachlan (2020) further argued that rentier states in the MENA region systematically underinvest in agricultural research and extension services, preferring instead to rely on food imports as a quick fix for domestic supply gaps, a pattern that has persisted despite recurrent price shocks.

Libya fits the allocation model almost perfectly. Since the early 1960s, the state has received the bulk of its income from oil exports, and its role has been primarily to allocate this income among various priorities, including food imports and subsidies. Agriculture has received attention in policy documents and development plans, but the underlying incentive structure has never favoured serious investment in domestic food production.

Birks and Sinclair (1985), writing before the 2011 upheavals, observed this pattern. They noted that Libya's oil wealth enabled its leadership to pursue ambitious projects without immediate financial constraints, but warned that the long-term costs of neglecting productive sectors would eventually become apparent. Subsequent developments have confirmed this observation.

2.2 Food Security as a Multidimensional Concept

Food security is generally understood in terms of four dimensions, as articulated by the Food and Agriculture Organization (FAO, 2008). Availability refers to the physical presence of food supplies. Access concerns the ability of households to obtain food through purchase or production. Utilization refers to the nutritional quality and safety of what is consumed. Stability requires that the other three dimensions are maintained over time and not subject to sudden shocks.

For import-dependent countries, stability is often the most problematic dimension. A country that produces little of its own food and relies on world markets is inevitably exposed to price movements, currency fluctuations, and disruptions in shipping or trade relations. Libya is a case in point. The country imports the vast majority of its wheat, rice, sugar, and vegetable oils, and any disruption to oil revenues, whether from price declines or production stoppages, has immediate implications for food import capacity.

The interaction between dimensions is also worth noting. Even when food is physically available in ports, access may be constrained by exchange rate depreciation that makes imported food too expensive for many households. Even when access is maintained through subsidies, the quality of what is consumed may be questionable if regulatory oversight is weak. This is particularly relevant for Libya, where periods of political instability have undermined institutional capacity across many areas.

3. Analytical Framework: Three Mechanisms

The argument of this paper rests on three interconnected mechanisms. Each operates at a different level, and together they account for the persistent fragility of food security in Libya.

3.1 The Crowding-Out of Agriculture

The first mechanism can be described as crowding-out. The availability of substantial oil revenues has historically reduced the perceived need to develop domestic agriculture. Why invest heavily in a sector with limited comparative advantage? Libya's climate is mostly arid, and water resources are scarce when oil earnings can pay for imported food?

This logic, while fiscally rational in narrow terms, has had cumulative consequences. Agricultural infrastructure has not been maintained. Extension services have been weak. Research capacity in the sector has not developed. Human capital has migrated to other sectors. The overall effect is that the agricultural sector is no longer capable of expanding production quickly even if the political will were to change.

One might argue that this was a rational choice: given Libya's climate, it makes economic sense to focus on oil and import food rather than trying to grow it locally. But this argument misses the point. The vulnerability created by import dependence was always a known risk. The question is not whether domestic agriculture could replace imports entirely it clearly cannot but whether a more balanced approach could have reduced the degree of vulnerability.

The paradox is that various agricultural development plans have been launched over the years, including major initiatives such as the Great Man-Made River project, the largest irrigation scheme of its kind in the world (Vandewalle, 2012). Yet agricultural output as a share of GDP has continued to decline. This suggests that the crowding-out effect is structural rather than accidental: the oil sector dominates the economy to such an extent that other sectors cannot develop coherently.

3.2 The Transmission of Volatility

The second mechanism concerns the transmission of oil price volatility into food price volatility. The chain of causation is relatively straightforward. When oil prices decline, export revenues fall. This reduces foreign exchange reserves. The local currency comes under pressure and depreciates. Since food is imported and priced in dollars, the local currency cost of food increases. Households face higher food prices, and those with limited incomes are most severely affected.

This mechanism has operated repeatedly over Libya's history. The oil price collapse of the 1980s created food access problems. The sanctions of the 1990s had similar effects. The post-2011 period has been particularly severe because oil revenues have not only fluctuated but also been disrupted by infrastructure damage and political conflict.

What makes this mechanism structural is that the outcome does not depend on policy choices. It is inherent in the economic model itself. As long as food is imported and oil is the primary source of foreign exchange, any shock

to oil revenues will produce a shock to food access. This is not a problem that can be solved by better economic management within the existing structure.

3.3 The Atrophy of Institutional Capacity

The third mechanism, which is the most difficult to reverse, is institutional atrophy. Managing food security in a production state requires various institutional capacities: agricultural extension, strategic reserves, market monitoring, early warning systems, nutritional surveillance, and emergency response coordination. These capacities develop over time through practice and are tested by repeated challenges.

In an allocation state, these capacities tend not to develop. The state's function is to buy food and distribute it, not to manage food systems proactively. When problems arise drought, price spikes, or supply disruptions the response is ad hoc and reactive. There is no institutional memory, no accumulated expertise, no established coordination mechanisms.

Libya's experience illustrates this pattern vividly. The country has no functioning strategic grain reserve, despite repeated recommendations (FAO, 2016). Early warning systems for food security exist on paper but not in practice. Coordination between different agencies and different parts of the country is fragmented. When crises have occurred, the effective response has come from international organizations rather than domestic institutions.

4. The Libyan Case

4.1 Agriculture in the Shadow of Oil

The agricultural sector in Libya has been in a state of relative decline since the oil era began. In the 1950s, before oil production started, agriculture employed a substantial portion of the population. Today, the sector accounts for only about 2% of GDP and employs a similarly small share of the workforce.

This is not for lack of effort or expenditure. Successive governments have launched agricultural development schemes, invested in irrigation projects, and provided various forms of support to farmers. Yet the results have been limited. Water availability is a major constraint. Libya is one of the most water-scarce countries in the world, but the deeper problem is structural. Agricultural policy has never been coherently integrated with broader economic strategy, and agricultural institutions have never developed the capacity to implement sustained programs.

The Great Man-Made River project is often cited as evidence of Libya's commitment to agricultural development. The project, which extracts fossil water from desert aquifers and transports it to coastal areas, is indeed impressive in scale. But it has not produced the anticipated agricultural transformation. Water is available for irrigation in some areas, but the accompanying support systems credit, extension, marketing, and research have not developed in parallel.

More recent work has examined the specific constraints facing Libyan agriculture. Ehwaeti (2025) assessed the prospects for sustainable agricultural development in Libya, highlighting the potential of modern irrigation technologies and desert farming techniques, yet concluded that institutional fragmentation, weak research capacity, and the absence of coherent credit policies remain binding constraints on meaningful expansion. The study also noted that even when projects such as the Great Man-Made River make water available, supporting infrastructure for storage, processing, and marketing has not kept pace, limiting the overall impact on domestic food supply.

4.2 Food Imports and Exchange Rate Pressures

Libya's food import bill is substantial, though it varies with international prices and exchange rates. Estimates suggest that wheat imports alone cost several hundred million dollars annually. The overall food import requirement is met by oil revenues, and the relationship is direct and immediate: when oil revenues decline, the capacity to finance imports declines correspondingly.

The exchange rate plays a crucial role in this mechanism. Libya has a dual exchange rate system, with an official rate set by the Central Bank and a parallel market rate determined by supply and demand. The gap between the two has widened significantly in recent years. The Middle East Institute (2026) reported that the parallel rate approached 9-10 dinars per dollar compared to an official rate of approximately 6.3 dinars. This gap is important because ordinary Libyans cannot access the official rate for food purchases; they must buy imported goods at the parallel market price.

The consequence is that food prices are highly sensitive to both international prices and the domestic exchange rate. The Minimum Expenditure Basket, a measure of basic living costs, rose by approximately 5% in February 2026 alone, with some regions recording increases of 9% or more (ACAPS, 2026). The most vulnerable households experience these increases most severely, as food accounts for a larger share of their expenditure.

A recent comprehensive study by Al-Abbasi (2025) developed a National Composite Index for Libya covering the period from 1990 to 2022, integrating the four dimensions of food security into a single measure. The findings of this study are particularly instructive: while food security in Libya was already fragile before 2011, largely due to import dependence, the post-2011 period witnessed a marked deterioration across all dimensions, with stability emerging as the most severely affected component. The study attributed this decline not only to political disruption but also to the structural inability of the rentier economy to absorb shocks without transmitting them directly to household food access.

Updated assessments from the Food and Agriculture Organization (FAO, 2025) reinforce this picture. The organization estimates domestic cereal production in Libya at roughly 150,000 to 160,000 tons for the most recent season, which is approximately 20% below the five-year average. At the same time, total import requirements for cereals are projected at 3.2 to 3.3 million tons, confirming that domestic production covers barely 5% of total consumption for staple grains, making the country one of the most import-dependent in the region.

This direct transmission mechanism from oil revenues to food import capacity has been explicitly addressed by Joueida (2026), who argues that Libya's recurring energy security crisis stemming from both oil price fluctuations and periodic disruptions to production infrastructure has systematically undermined the state's ability to finance food imports. The study concludes that food security in Libya has effectively become hostage to oil market conditions, and that this relationship is structural rather than merely cyclical, meaning that it will persist regardless of short-term policy adjustments.

4.3 Institutional Weaknesses

The institutional dimension of Libya's food security problem is perhaps the most difficult to address because it reflects decades of accumulated neglect. The state institutions responsible for food security have been underfunded and understaffed for a long time. The political fragmentation of the post-2011 period has compounded these problems, with different authorities in the east and west operating independently and sometimes at cross-purposes.

The proposed National Food Security Strategy (2025-2035) acknowledges many of these weaknesses. The strategy document identifies weak institutional capacity, absence of sustainable funding independent of oil revenues, and a technological and scientific gap as major constraints (Hindi, 2025). That the strategy identifies these problems is encouraging; but the history of agricultural planning in Libya gives little reason for optimism about implementation.

International organizations have attempted to fill some of the gaps. FAO has provided technical assistance. WFP has implemented food assistance programs. WHO has conducted nutritional surveillance. But these efforts, however useful, do not substitute for domestic institutional capacity. The pattern is one of intermittent support without sustained development.

5. Implications and Conclusion

5.1 What the Analysis Suggests

Taken together, these recent studies confirm the central premise of this paper: that Libya's food insecurity is not a transient condition attributable to specific policy errors but rather a structural feature of the rentier economic model. Al-Abbasi (2025) demonstrated this through quantitative index construction; Joueida (2026) established the causal link from energy volatility to food access; and Ehwaeti (2025) showed the supply-side constraints that prevent domestic agriculture from filling the gap. The convergence of these findings, drawn from different methodological approaches and data sources, lends considerable weight to the structural argument advanced here.

This conclusion has significant implications for policy. It suggests that short-term interventions, however well-intentioned, are unlikely to produce lasting improvements. Food subsidies, ad-hoc imports, and international assistance can address immediate needs but do not alter the underlying structural conditions.

5.2 What Can Be Done?

If the structural diagnosis is correct, then the priority must be economic diversification. Libya cannot achieve food security as a pure rentier state. Diversification is a long-term process that requires political stability, policy

coherence, and institutional development. These conditions do not currently exist, but recognising the priority is nevertheless important.

In the shorter term, some measures can reduce vulnerability. A strategic grain reserve, managed professionally and insulated from short-term fiscal pressures, could provide a buffer against supply disruptions and price spikes. Targeted social protection programs, such as cash transfers or school feeding, could protect the most vulnerable households from the worst effects of volatility. These measures are not a substitute for structural reform, but they could mitigate the immediate consequences.

International partners could contribute by providing technical support and, where appropriate, financing for such measures. But they should not assume that their involvement substitutes for domestic institutional capacity. The goal should be to build capacity, not to replace it.

5.3 Concluding Observations

The relationship between oil dependence and food insecurity in Libya is not coincidental but causal. The rentier model that has dominated the Libyan economy since the 1960s produces food insecurity systematically rather than accidentally. This is not an encouraging conclusion, but it is an important one. It suggests that efforts to improve food security must be situated within a broader understanding of the economic structure. The problem cannot be solved by agricultural policy alone.

This paper has aimed to make the structural mechanisms more explicit and to trace their operation in the Libyan case. In doing so, it has drawn on theoretical insights from the rentier state literature and applied them to the specific domain of food security. The hope is that this contributes to a better understanding of why Libya remains food insecure despite substantial resource wealth, and what might be required to change this situation.

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Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

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