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Abstract

The paper shows that central banks in Arab oil exporters are not independent. Low independence reflects institutional arrangements that allow the executive branch to influence, interfere and in some cases, dominate over central bank operations. The paper argues that in a context of weak institutions, CBI has not always mattered for macroeconomic policy outcomes in Arab oil exporters. GCC central banks delivered a better macroeconomic policy performance than those of the populous group. CBI mattered less for the GCC because the credible peg discouraged discretion and was a good substitute for it. Soft peg arrangements in the populous economies in a context of weak institutions and discretionary policymaking in the absence of a *de facto* independent central bank led to disappointing monetary policy outcomes. As oil exporters adapt to a new normal of low oil prices, the sustainability of fixed exchange regimes may not be guaranteed without sound macroeconomic institutions. Stronger institutions and effective accountability mechanisms are needed to insulate central banks from political pressures. In the short-term, a rules-based framework could help.

JEL Classification: E58, E52, F33, E61, E63, Q43
Keywords: Central Bank independence, monetary policy, exchange rate regimes, oil wealth, institutions, institutional arrangements, policy objectives, economic performance, oil exporters, oil curse

ملخص

تُظهر الورقة أن البنوك المركزية في الدول العربية المصدرة للنفط ليست مستقلة. يعكس انخفاض الاستقلالية الترتيبات المؤسسية التي تسمح للفرع التنفيذي بالتأثير والتدخل وفي بعض الحالات ، وفي السيطرة على عمليات البنك المركزي. تشرح الورقة أنه في سياق المؤسسات الضعيفة ، لم يكن البنك التجارى الدولى دائما ذا أهمية بالنسبة لنتائج سياسة الاقتصاد الكلي في البلدان العربية المصدرة للنفط. فحققت البنوك المركزية في دول مجلس التعاون الخليجي أداءً أفضل في سياسات الاقتصاد الكلي مقارنة بأداء اقتصادات المجموعة الكثيفة السكان. وكان البنك التجارى الدولى أقل أهمية بالنسبة لدول مجلس التعاون الخليجي لأن ربط العملة الموثوق به كان يكبح حرية التصرف وكان بمثابة بديل جيدً لها. كما أدت الترتيبات الناعمة لربط العملة في الاقتصادات المكتظة بالسكان، في سياق ضعف المؤسسات وصنع السياسات التقديرية في غياب بنك مركزي مستقل بحكم الأمر الواقع ، إلى نتائج مخيبة لآمال السياسة النقدية. وبما أن مصدري النفط يتكيفون مع مستوى جديد من انخفاض أسعار النفط ، فقد لا يمكن ضمان استدامة نظم تبادل العملات الثابتة دون وجود مؤسسات اقتصادية كلية سليمة. هناك حاجة إلى مؤسسات أقوى وآليات فعالة للمساءلة من أجل النأى بالبنوك المركزية عن الضغوط السياسية. وفى المدى القصير، يمكن أن يساعد إطار قائم على القواعد في هذا الصدد.

1. Introduction

As "bankers of the government", central banks of Arab oil exporters carry out several functions including providing deposit accounts, managing the treasury single account and acting as fiscal agent (managing auctions). They may be responsible solely or jointly with a sovereign wealth fund for managing foreign exchange reserves accumulated through massive oil windfalls, which also requires coordination with the government. They also implement monetary policy in a context of macroeconomic volatility induced by the oil price cycle. Even though the scope for autonomous monetary policy is reduced under fixed peg arrangements, adequate institutional arrangements between the central bank and the government are necessary to provide a clear division of responsibilities and accountability. The discussion of these issues is timely given that the sustainability of fixed exchange regimes in a low oil price environment is not guaranteed without sound macroeconomic institutions.

One way to implement these adequate institutional arrangements is to promote central bank independence (CBI). Based on the time inconsistency models of Kydland and Prescott's (1977) and the seminal work of Barro and Gordon (1983), autonomous central banks can deliver low inflation. Rogoff (1985) also showed that the delegation of authority to a relatively conservative central bank rather than opportunistic politicians could avoid excessive inflation. Moreover, Sargent and Wallace (1981) explain that more independent central banks (when monetary policy is dominant) can resist the pressure for monetization and can thus result in lower fiscal deficits. CBI has been claimed to yield benefits including low inflation (Cargill, 2013) but concerns have arisen in the wake of the 2008 financial crisis as to whether the expansion of central banks' mandates and powers have increased risks of fiscal dominance and undermined price stability (Bayoumi et al., 2014).

This paper assesses *de jure* CBI in Arab oil exporters using an extension of the Cukierman index (Cukierman, 1992 and Cukierman et al., 1992) proposed by Jácome and Vázquez (2005). Relative to previous work (Gisolo, 2009, Ameli, 2011 and ESCWA, 2011), the CBI index used not only captures the standard aspects related to the central bank governance structure and relationship with the government but also institutional aspects like the responsibility for policy formulation, rules governing the lender of last resort (LOLR) functions as well as accountability and transparency of central banks. The paper also introduces a discussion on the interaction between CBI, political institutions and exchange rate regimes.

The analysis is limited to 9 Arab oil exporters and Chile. The 6 GCC countries (Bahrain, Kuwait, Oman, Saudi Arabia, Qatar and United Arab Emirates (UAE)) are endowed with large oil rents while 3 populous countries, being Algeria, Sudan, and Yemen are less wealthy. Chile is a copper exporter where less significant but better managed resource wealth has been associated with an increase in income per capita (by more than 25 times since the 1970s) and improved macroeconomic policy outcomes. One factor that has contributed to Chile's development is its institutional reform process which extended to macroeconomic institutions and resource management institutions.

The paper shows that central banks of Arab oil exporters are not independent. Low independence reflects institutional arrangements that allow the executive branch to influence, interfere and in some cases, dominate over central bank operations. The paper argues that in a context of weak institutions, CBI has not always mattered for macroeconomic policy outcomes in Arab oil exporters. GCC central banks delivered a better macroeconomic policy performance than those of the populous group. CBI mattered less for the GCC because the credible peg discouraged discretion and was a good substitute for it. Soft peg arrangements in the populous economies in a context of weak institutions and discretionary policymaking in the absence of a *de facto* independent central bank led to disappointing monetary policy outcomes.

The rest of the paper is organized as follows: Section I constructs and discusses the CBI index and underlying institutional arrangements for Arab oil exporters based on information derived from central bank legislations. Section II explores the relation between monetary policy outcomes and CBI – albeit without establishing causality. Section III assess to what extent CBI matters in Arab commodity exporters. The last section concludes.

1.1 An Assessment of Central Bank Independence in Arab Oil Exporters

1.1.2 The Modified Cukierman Index (MCI)

The measurement literature, surveyed by Cargill (2013), identified the institutional arrangements that enhance central bank autonomy. The first CBI index was proposed by Bade and Parkin (1982) capturing central bank "political independence", defined as its ability to select its objectives without influence from the government. This aspect assessed the government's involvement in the appointment process of the governor and board members, their length of tenure relative to the executive, the government representation on the board and thus its influence on monetary policy decisions, and finally whether the "price stability" is the explicit objective in the central bank mandate.

Over time, the scope of the Bade and Parkin index was extended to include "economic independence" or the ability of central banks to choose policy instruments (Grilli, Masciandaro, and Tabellini, 1991; Alesina and Summers, 1993 and Eijffinger and Schaling, 1993). Economic autonomy accounts for the presence of legal constraints on central bank lending to the government and for central bank autonomy in monetary policy formulation. Cukierman (1992) and Cukierman et al. (1992) proposed an index with four categories: (i) appointment, term and dismissal of the governor; (ii) central bank formulation and authority over monetary policy; (3) objectives; and (4) limitations on central bank credit to the public sector. The Modified Cukierman Index (MCI), as described by Jácome and Vázquez (2005) builds on the Cukierman index. Relative to the latter, it adds a third dimension on accountability and transparency. To assess economic independence, the MCI incorporates two additional aspects, central bank lending to commercial banks and central bank financial autonomy. It also assesses the role of the central bank in setting exchange rate policy and whether its approval is required for government's debt to evaluate autonomy in policy formulation. To assess political independence, it adds the appointment and dismissal of the board members (not just the governor) and introduces more granularity to assess the autonomy of central bank boards. The structure of the Cukierman index and the MCI are presented in Appendix I.

The MCI incorporates the following 3 aspects and sub-aspects: (1) political independence: (i) central bank boards of directors: modality of appointment, length of tenure—relative to the executive branch—and the legal provisions for dismissal (20 percent), (ii) nature of the central bank's mandate (15 percent). (2) economic independence: (i) autonomy of central banks in the monetary policy formulation (15 percent), (ii) restrictions on central bank lending to the government and to commercial banks as a LOLR, and financial independence (40 percent). (3) accountability (10 percent).

1.2 MCI scores in Arab oil exporters

In contrast to the CBC which was established in 1925, Arab central banks are relatively young institutions, established after countries gained independence during the 1960s and 1970s. In the GCC, they were often preceded by monetary agencies or currency boards/authorities established under British rule (table 1). They did not have clear mandates but were assigned limited functions such as issuing banknotes and coins and ensuring their full coverage in gold and foreign currencies. Foreign currency circulated until the 1960s, with the exception of Saudi Arabia (Al-Hijaz), which issued its first national currency since 1916 (table 1). Over time, modern central banks came into being, the latest being the Qatar Central Bank (QCB) and the Central Bank of Bahrain (CBB) which were established in 1993 and 2006, respectively.[2]

The remaining of the section constructs the MCI score for the 10 countries. The attribution of scores is based on information derived from central bank legislations which are not necessarily consistent with *de facto* independence (table 2).

1.3 Political Independence

Political independence assesses: (i) the political economy of central bank boards and (ii) the legal mandate of the central bank. A central bank board is considered politically independent if (a) the tenure of the governor and board members is longer than that of the nominating or appointing authorities, (b) there is minimal intervention from the government in the procedures for appointment and dismissal, and (c) there are legal restrictions on the governor holding another government office. It is considered autonomous if it pursues and is accountable for a single policy objective, price stability (or currency stability), in clear priority over others.

Overall, the CBC board is the most independent while most Arab central banks 'boards are influenced by the executive authorities (table 3).

The political economy of the central bank boards

In order to dissociate central bank boards from the political cycle, the appointment of its senior officials can be subject to a double-veto or multi-faceted process, with one body providing the

[2] The Central Bank of Yemen was established in 1971 but it merged with the Bank of Yemen under the original name of "Central Bank of Yemen" when the northern and southern sectors of Yemen reunited in May 1990.

nomination and another (like the legislature) providing the appointment (Lybek and Morris, 2004). Dismissal should be also delegated to a supervisory board, an independent tribunal, Supreme Court ruling, ideally with the consent of the legislature. The legislation should codify the specific circumstances that lead to their dismissal (improper conduct or negligence leading to poor performance and/or potentially damaging the credibility and reputation of the institution). Finally, legislations should prohibit governors from engaging in activities that would generate a conflict of interest, particularly holding office in institutions that are supervised by the central bank (Lybek and Morris, 2004).

Terms of office of governor and board members

The 10-year tenure of office of the CBC governor and board members is longer than the 4-year term of the President of the Republic and the 8-year term served by members of the Senate, which are both parties involved in their appointment. In contrast, the terms of office of Arab governors and board members are less compatible with CBI (table 3). In most GCC central banks and the CBY, governors' terms (4 years the CBUAE and CBY and 5 years for the rest) are shorter than that of their monarchs and or their executive governments responsible for their appointment. Even though the CBK governor's term (5 years) is longer than the term of the appointing finance minister (FM) (4 years), the terms of half of the governors (3 years) is shorter than the term of the recommending FM. The term of the two government representatives who sit on the board is not specified in the legislation. The CBS governor's term is equal to the presidential term (5 years). The BoA's legislation makes no reference to the terms of the governor and board members suggesting they are appointed for a non-defined period.

Appointment of governor and board members, dismissal of board members and conflict of interest

The appointment and dismissal of the CBC governor and board members involves the government but requires the prior approval of the Senate.

For Arab central banks, the executive branch (head of the state such as King, the Council of Ministers (CoM) or FM) appoints and dismisses the governor and board members. In Bahrain, the central bank board (appointed for 4 years) recommends the governor (for 5 years) but the King must approve this recommendation. In Kuwait, the FM recommends the governor and 5 (out of 8) board members and the CoM appoints the representatives of the Ministry of Finance (MoF) and the Ministry of Commerce and Industry.

Similarly, dismissal recommendations from the board often require the executive branch approval (CBO, CBS and CBY) if not directly implemented by them (CBK, SAMA and CBUAE). The CBB board can dismiss its members. The legislations of the QCB and BoA do not describe the dismissal process. With the exception of SAMA and BoA, legislatons codify the justifications for the dismissal of board members usually linked to the absence for a specific number of times from the board meeting, criminal activity or unethical behavior. All legislations except SAMA's contain legal provisions on conflict of interest.

Central bank objectives

The objective of GCC central banks is to preserve the stability of the exchange rate, which is recognized as the nominal anchor for monetary policy, while those of the populous group have explicitly made price stability their primary objective (in addition to currency stability in Sudan). Among the GCC central banks, only the QCB has done so.

Except for SAMA's charter which legislates price stability as a singular objective, all other legislations described broad mandates that encompass the objectives of growth and/or financial stability without setting priorities among them (tables 3 and 4). Growth objectives are often considered by allowing central banks to support the general orientation of the government's economic policies (CBC, CBB, QCB, CBS and CBY). The legislations of the QCB and CBY prioritize central bank's objectives (price stability and financial stability) over those of general economic policy, albeit without giving price stability priority over financial stability. The QCB legislation describes coordination mechanisms between the central bank and government in relation to different economic, monetary, fiscal and debt policies (articles 42-44). The BoA's legislation also describes coordination between the governor and the FM on matters related to external and public finances, inflation, economic development, credit and money or other matters having repercussions on the monetary situation.

Because the goal of financial stability may extend beyond central bank's conventional function of banking supervision, calls have been made to entrust this responsibility at least partially to an autonomous agency (Lybek, 2004). Most charters require central banks to act as the supreme authority for the regulation and oversight of the conventional banking system.[3] But the central banks of Algeria, Qatar, UAE and Chile share this function with other institutions. The Dubai financial services authority (DFSA) and the Qatar's financial centre (QFC) regulatory authority have a mandate to regulate and supervise financial activities though they lack the autonomy of Chile's Superintendency of Banks and Financial Institutions. Though both authorities enjoy financial and administrative autonomy, they remain accountable to the executive branch which appoints and dismisses board members (Qatar). Also, these authorities only have power to suggest regulations. In the case of UAE, DFSA only covers activities conducted through the Dubai international financial centre (DIFC), the financial free zone. In Algeria, supervisory functions are entrusted to three institutions: (i) the Monetary and Credit Council, which is the regulatory authority,[4] (ii) the banking commission, responsible for supervision and has jurisdiction for imposing sanctions and (iii) the BoA prepares legislation on bank regulatory matters and carries out audits.

[3] To reflect the growing Islamic banking sector, charters (except Algeria's) were revised to put these banks under the oversight of the central bank and/or issued Islamic banking laws (UAE).

[4] This council is the highest policy-making body of the BoA comprising of board members and two experts in economic and monetary matters. It is vested with the standard powers of a board related to the definition and conduct of monetary policy, operation and security of payment systems, banking sector oversight etc.

1.4 Economic Independence

Central bank economic autonomy improves with (i) ability to operate monetary policy independently from the executive and (ii) limitations on lending to the government and the financial sector and by enjoying financial autonomy. Again, the CBC is the most economically independent central bank, and the least is the CBK (table 5).

Policy formulation

Complete autonomy requires that central banks formulate monetary policy without influence from government. In practice, the responsibility of objective-setting can lie entirely or be shared with the government (goal dependence) but central banks must at least be able to set instruments without interference from the government (Debelle and Fischer, 1994). Because conflicts may arise between the central bank and the government, legal provisions should provide resolution mechanisms and should also require public disclosure of the conflict and its resolution.

Central banks' policy formulation is autonomous when they (i) formulate monetary and exchange rate policies, (ii) have final authority over objectives during conflict, and (iii) are required to approve government's debt to help enforce fiscal discipline. Policy formulation is most autonomous in the BoA and the least in SAMA.

Who formulates monetary policy?

With the exception of SAMA and the CBK, Arab central banks have the authority to set monetary policy objectives and in a few cases, this authority is shared with the government (CBB and CBS) (table 6). Meanwhile, some of them share the responsibility of exchange rate policy formulation with the government (BoA, CBS, CBY and CBC) while for others the government consults the central bank (Kuwait and UAE). For instance, the CBUAE board proposes the parity through a majority decision, which must be approved by the CoM (article 62). The Kuwaiti government sets exchange rate policy and only seeks the "opinion of the governor" (article 2). In Saudi Arabia and Oman, the King/Sultan sets the parity rate with no requirement to consult with central bank.

Government directives and conflict resolution

Two GCC central banks (Qatar and UAE), the BoA, CBY and CBC all have final authority over their policy objectives. The CBUAE, BoA and CBC have no government representation on their boards. For the BoA and CBC, the FM may attend meetings. The CBC legislation allows the FM to suspend the implementation of a board resolution for no more than 15 days, unless board members unanimously insist on its implementation (section 19). The BoA legislation allows the Algerian FM to raise a motion to the High Council of State to cancel a central bank regulation within 60 days of publication date in the official journal, though this motion remains non-binding until the Council reaches a decision (article 65).[5] Meanwhile, the MoF representative on the

[5] The state council is the supreme jurisdiction of the administrative as well as the Supreme Court for the judicial and administrative courts.

CBY board does not have voting rights. Moreover, the CBY legislation explicitly prohibits central bank officials from taking instructions from third parties (articles 3 and 13).

Some GCC legislations severely undermine the authority of the central bank and therefore its instrument independence. For instance, the CBB legislation renders the FM responsible for monitoring the CBB and is accountable to parliament for the supervision of the CBB's operations (article 173). The CBK legislation gives the MoF representative the right to veto any board decision issued in relation to monetary and credit policy, and refer this decision to the FM who should settle the matter in 7 days otherwise the decision goes through (article 27). The law does not describe conflict resolution procedures if the FM counteracts the decision. And even though there is no government representation on the SAMA board, the banking law requires that board obtains the FM approval to change the statutory reserve requirement ratio.

Central bank involvement in debt approval

The CBS legislation is the only one that gives the authority to board of central bank to approve government debt (article 50). Other central banks (except CBO and SAMA) are required to provide general technical advice about public finance/financial matters.

Central bank lending

In order to maintain central bank autonomy and avoid fiscal dominance, legislations should prohibit central banks from extending credit to the government (and public institutions) including through the purchase of government securities so as not to increase monetization risks and complicate liquidity management (Jácome et al., 2012). As a second-best solution, they can allow central banks to *conditionally* lend to governments.

Central bank lending to financial institutions under the LOLR function should also be regulated so that the central bank provides individual emergency liquidity to illiquid but solvent banks. The law should also protect the central bank's financial autonomy and should obligate the government to recapitalize it when needed.

Limitations on advances and lending to the government

Legal provisions should be explicit about the following criteria for central bank advances to the government: (i) the purpose of financing (compensating for seasonal shortfalls in fiscal revenues), (ii) the ceilings on borrowing (at a limited proportion of annual fiscal revenues or spending), (iii) the maturity of financing (repayment should be within the same fiscal year), (iii) central bank's authority over terms and conditions and (iv) their pricing at market interest rates.

The only two legislations that have instituted full bans on central bank credit to the government are those of the CBC and SAMA. The CBC may only do so in the case of external war or danger thereof, which must be qualified so by the National Security Council. Both central banks cannot purchase government securities, or those of public companies.

All other central bank can conditionally lend to the government and/or purchase government securities in the primary market (table 8). Financing from the QCB, CBUAE and BoA is not limited to seasonal revenue shortfalls. The CBY can extend "emergency loans" to the government if it is not inconsistent with monetary policy objectives. It is required to submit a report to the CoM on the risks of these loans for monetary policy. It may also grant special loans with long maturities for membership fees and payments related to international organizations.

All legislations impose quantity limits on central bank advances to the government (table 8). The limits hover around 10 percent of some definition of revenue (except for the CBB where the ceiling is defined in relation to spending). The QCB's limit serves as the lower bound (5 percent of average revenue of past 3 years). The limits are laxer for the CBB and CBY (at 25 percent of expenditure/revenue).

The maturity of advances range between 90 days and 6 months (table 9). In the UAE, maturity can go up to two years. The legislations in Kuwait and Oman prevent the central bank from granting any new advances if previous outstanding amounts have been settled. In contrast, delays in repayments bear no sanctions in Sudan and an agreement to reschedule could be amiably reached between the central bank and the FM.

Furthermore, the legislations of SAMA and CBC prohibit them from purchasing public debt while such purchases are subject to conditions in other legislations. The QCB and CBY can purchase public debt in the secondary market. And while the QCB can do so without quantity limits, the CBY is subject to the same quantity limits imposed on advances and such purchases must be consistent with price stability or "*are required for investing assets of the Staff Requirement Fund of the Bank" (article 33)*. The CBB's purchase of government debt is conditioned to the cases where the debt is not fully subscribed (article 26). Finally, the BoA can extend exceptional advances to the treasury to "actively manage the external debt".

Interest rate decisions

Legal provisions about the terms and conditions of the financing are less uniform among Arab central banks (table 10). The CBB and QCB boards can set their interest rates while the CBK, the BoA (in the case of the overdraft) and the CBS negotiate them with the FM. The terms and conditions for Algerian external debt advances are agreed upon between the BoA and the treasury (and communicated to the council of money and credit. The president is informed).

No legislation requires central banks to provide financing to governments at market rates, even those where central bank boards decide on the interest rates. This may indicate that the government may be receiving preferential below-market rates on central bank loans. In the CBUAE, the advances are interest-free.

Beneficiaries of central bank financing

The CBC is authorized to exclusively carry out operations with financial institutions, suggesting it cannot engage with any non-financial institutions (article 27). In the case of the Arab world, some legislations (QCB, SAMA, BoA and CBY) prevent the central bank from giving credit to non-financial institutions and SAMA is further prohibited from dealing with the private sector. Central banks can also purchase the debt of non-financial institutions, though these operations require the FM's approval in the CBB and CBK. In the case of the CBB and CBS, these operations are limited to public entities. Moreover, the CBS is only authorized to engage in such activities if they are denominated in foreign currency. The CBO can purchase debt instruments if they are guaranteed by the government and their maturity extend to 10 years. The CBK can finance "development projects" and provide loans to strengthen financial markets with the approval of the FM. It can also hold shares in public sector companies (article 37).

Lender of Last Resort Function (LOLR)

The provision of emergency liquidity through the LOLR function is present in all legislations except SAMA's. Legal provisions of the CBB, CBK and QCB link such function with illiquid financial institutions. In addition to the facility to illiquid banks, the CBB can also grant liquidity to financial institutions "in the ordinary course of business". The CBS can also provide open assistance to banks "when needed." The CBK facility is capped to a 6 month-period. The CBO, CBUAE and CBY have the authority to grant short-term advances/loans to banks (90 days to 6 months) against adequate collateral, though financing is not tied to liquidity problems. The CBUAE does not require collateral for loans for very short maturities (1 week). The BoA can give credit to banks with up to 1-year maturity. The CBC has two liquidity facilities to banks. The first provides emergency liquidity for a period of 90 days to banks with "difficulties arising out of a temporary liquidity shortage." A maturity extension requires a resolution adopted by the majority of all board members with the prior opinion of the Superintendence of Banks and Financial Institutions (SBIF). However, the second credit facility grants credit or acquires assets from financial institutions when a contract with creditors has been proposed or they have been declared in bankruptcy (article 36), suggesting that the CBC may be providing finance for bank restructuring.

Financial autonomy

Arab central banks have some degree of financial independence with a few exceptions. The legislations of the CBK and SAMA do not allow the government to capitalize the central banks and that of the CBK does not state that the CBK has a financial autonomy. Moreover, the CBK board's decisions on regulations related to financial and administrative issues require the approval of the FM.

1.5 Accountability

Accountability of central bankers is crucial to counterbalance its independence. Transparency is necessary to complement accountability. The MCI rewards legal provisions that require central banks to regularly: (i) report on their policy targets and achievements, (ii) publish their financial statements, in particular, when they follow international accounting standards and are certified by an independent auditor. Country scores are reported in table 11.

Accountability and transparency of central banks

All GCC central banks are required to report on their performance to the executive (FM, CoM, King or Sultan) but no governor is required to appear before the legislative (table 12). They are also not required to inform the executive outside of this regular reporting. The Bahraini FM is accountable to the parliament of the CBB performance and of the supervision of the CBB's operations (article 173). Like the CBC, central banks of the populous group have better reporting mechanisms as their legislations require them to annually report to their national assemblies on the execution of policies.

Audited financial statements of the CBC must be approved by the SBIF, submitted to both the Senate and President and published in the official gazette. All central bank charters in the populous group as well as two of GCC central banks (CBB and CBUAE) have disclosure requirements of audited central bank financial statements (table 12). The legislations of CBK, CBO and QCB require the audit of central banks' financial statements but remain silent on publication requirements. The auditors are appointed by the Board of Directors of the CBB, QCB and CBUAE while in the CBO and CBY, they are appointed by the executive. In Yemen, they are appointed by PM based on a list submitted by the board to the CoM. The annual statements and the audit report are sent to the executive, except in Yemen where they are sent to the legislative. In Bahrain, they are submitted to the national audit council and the CoM. The SAMA legislation does not require the audit of the central bank's financial statements.

1.6 Conclusion

As suggested by the MCI scores, central banks of Arab oil exporters are less independent relative to the CBC (table 13). The CBC independence is enshrined in the constitutional organic law. Its internal governance ensures independence from political authorities. Its economic autonomy is derived from minimal government influence over policy formulation, a ban on credit to the government, financial autonomy and accountability to the Senate.

Low scores in all 3 aspects reflect institutional arrangements that allow the executive branch to influence, interfere and in some cases, dominate over central bank operations. Legislations allow the executive branch to appoint and dismiss board members and interfere with central bank operations which severely undermine their political independence and accountability. All Arab central banks score poorly in these two aspects. To a lesser extent, they do not provide central banks with final authority over policy formulation and provide loose terms for central bank financing of government deficits, especially through the purchase public debt in the primary market, in most cases without limits.

Country scores vary but GCC central banks are slightly less independent than those of the populous group. The CBY is the most independent central bank among Arab central banks reflecting strong economic independence reflecting autonomous policy formulation, a ban central bank lending to non-financial public institutions (though not the central government, regulating liquidity provision under the LOLR and preserving the financial autonomy of the central bank. Meanwhile, the CBO and CBK are among the least independent, scoring poorly in economic autonomy.

2. Legal Central Bank Independence and Macroeconomic Trends in Arab Oil Exporters

This section shows that less independent GCC central banks have been associated with better macroeconomic policy outcomes including price stability, financial stability and fiscal deficits than their counterparts in populous economies.

Price stability

Consistent with their mandates, GCC central banks maintained both currency and inflation stability. This was aided by an exchange rate peg (to the US$ and to an undisclosed composite basket of currencies in the case of Kuwait) supported by a massive stock of foreign exchange reserves. Save for a 1970s, a period of parity adjustments, rising inflation and high oil prices, the peg has been associated with low single digit inflation (figure 1).

In contrast, price stability has remained an elusive objective for central banks in Sudan and Yemen, despite its explicit inclusion in charters. Long-term inflation persists in the double-digits and did not converge to price stability levels. These poor outcomes were accompanied by the collapse of short-lived exchange rate-based stabilization attempts, because of fiscal dominance over monetary policy (Elbadawi et al., 2019). Sudan managed exchange arrangements often included multiple exchange rates and were associated with currency instability (60 percent) and high inflation (40 percent) between 1980 and 2013 (figures 1 and 2). The CBY adopts a monetary target but maintains a *de facto* peg to the USD (IMF, 2013). This ambiguity has been associated with high inflation which was exacerbated by unsettled domestic and regional political environments including episodes of violence[6]. Algeria's exchange rate anchor has kept inflation (hovering between 5-10 percent) higher than Yemen and Sudan but lower than the GCC.

The CBC has achieved disinflation and maintained inflation at low levels since the 1990s, reflecting institutional reform including the adoption of inflation targeting as well as maintaining a stable and competitive real exchange rate (Jácome and Vázquez, 2005). Exchange rate fluctuations reflect several exchange rate regime changes over the past five decades, including the transition to a float in 1999.

[6] Campillo and Miron (1996) show that politically unstable countries have higher inflation rates and that CBI does not help to explain a country's inflation history.

Financial stability

Financial sectors in the GCC remain vulnerable to procyclical financial flows induced by oil price cycles (figure 3).[7] IMF (2015) estimates that a 1 percent drop in oil prices would result in a reduction in real bank credit growth by 0.3 percentage point, in deposits by 0.2 ppt and a rise in the ratio of nonperforming loans (NPL) to gross loans by 0.1 ppt in the long run. In the aftermath of the collapse of the credit and asset price boom in the GCC in late 2008, the banking sector liquidity squeeze compelled some GCC central banks and to provide liquidity support. Despite some some history with financial vulnerability, the CBC has been capable of minimizing severe financial disruptions and preserving financial stability.

Fiscal deficits

Figure 4 suggests that stronger central bank restrictions on deficit financing is associated with lower inflation. As argued in Elbadawi et al (2019), there is no traditional case for fiscal dominance in the GCC as large hydrocarbon revenues have generally allowed most of them to maintain long-term fiscal surpluses of around 8 percent of GDP and much higher in Saudi Arabia, Kuwait and UAE (figure 5). Nevertheless, fiscal deficits tend to be procyclical; surpluses appear during oil booms but tend to disappear or decline during busts. In contrast, there fiscal dominance concerns in Sudan and Yemen are quite serious, a conclusion that echoes that of Elbadawi et al. (2019). Chile follows a fiscal rule which helps limit procyclicality.

3. Does CBI Matter in Arab oil Exporters?

The answer to this question requires an understanding of the ambiguous relationship between CBI and monetary policy outcomes. A first explanation is that practices often differ from rules described in legislations. Better-written central banks charters in populous economies relative to the GCC helped provide a reasonable score for *de jure* independence but did not prevent central banks from deviating from policies that lead to price stability.

The second explanation is related to the institutional choice and its political underpinnings between CBI and fixed exchange rates that countries make to reduce inflation. The literature on whether these two options complement or substitute each other is extensive (Bernhard et al., 2002). Both involve a monetary policy rule that reduce the discretion of central bankers and that can act as a credible commitment to low inflation. They also both involve a tradeoff between flexibility and credibility. On the one hand, an independent central bank, faced with unexpected real shocks, can either maintain low inflation at the expense of excessive output volatility or vice versa. On the other, the choice of a credible fixed exchange rate may deliver price and external stability but sacrifices monetary policy autonomy and thus flexibility to adjust to real shocks (Devarajan and Rodrik, 1991). And while hard pegs and CBI may be substitutes, softer exchange rate arrangements and CBI are more likely complements. The former allows a degree of policymakers' discretion which may exacerbate time inconsistency problems.

[7] The financial sector remains underdeveloped in the populous group and is therefore not reported.

What thus determines the policymakers' choice between these institutions? The answer can be found in the political economy literature. Bernhard et al. (2002) argue that politicians will choose an independent central bank only where they can credibly commit to maintaining that institutional arrangement. Keefer and Stasavage (2003) show that CBI can be more effective than exchange rate pegs in enhancing credibility and delivering low inflation when multiple veto players are present. This echoes the conclusion from Malik (2019) that independent central banks matter most in a context of democratic institutions where greater accountability makes it costlier for politicians to deviate from the socially preferred central bank target (Malik, 2019). Hayo and Voigt (2008) find evidence that a significant relation between CBI and inflation only exists if checks and balances are sufficiently strong. When, however, economic conditions are volatile (such as the occurrence of unanticipated economic shocks) and when there is lack of central bank transparency, exchange rate pegs which allow the public to judge whether a policymaker has deviated from *ex-ante* announcements, may be more effective in reducing inflation (Keefer and Stasavage, 2003).

The above discussion helps better understand the relationship between CBI and macroeconomic policy outcomes in Arab oil exporters. First, low levels of *de jure* political independence and accountability of Arab central banks are not surprising given the low levels of political openness and government accountability (figure 6). In this context, it is normal to expect strong interference of the executive branch in monetary policy decision-making and not establish adequate accountability mechanisms. It also explains why Chile's open political institutions produced an independent central bank and better policy outcomes.

Second, the discussion also helps understand why low CBI in a context of limited political openness was associated with low inflation in the GCC but not in the populous group. A credible exchange rate peg was a good substitute for CBI in the GCC. It imported credibility from the US$ and was supported by massive reserve accumulation and fiscal surpluses from large oil windfalls, as well as labor market flexibility. In this context, it has delivered external stability, provided an anchor for low inflation expectations and thus boosted *de facto* domestic credibility, though perhaps at the expense of low external competitiveness and limited diversification away from oil (Elbadawi and Kaltani, 2016).

Meanwhile, populous economies opted for soft peg arrangements in a context of fiscal dominance as described in Elbadawi et al. (2019). In this set-up, the peg was not credible and should have been complemented by *de facto* CBI to ensure good macroeconomic policy outcomes. In a context of discretionary policymaking and limited accountability, well-written central bank charters were not sufficient to prevent central banks' actual policies to significantly deviate from their legal mandates.

3.1. Conclusion

This paper has assessed the degree of CBI and underlying institutional arrangements in several Arab oil economies. The analysis shows that central banks of Arab oil exporters are less independent in *de jure* terms than the CBC. Low scores in all 3 aspects of independence reflect institutional arrangements that allow the executive branch to influence, interfere and in some cases, dominate over central bank operations.

The paper has argued that in a context of weak institutions, CBI has not always mattered for macroeconomic policy outcomes in Arab oil exporters. GCC central banks delivered a better macroeconomic policy performance than those of the populous group. CBI mattered less for the GCC because of a transparent rule-based monetary policy rule in the form of a credible peg that discouraged discretion and was a good substitute for it. Soft peg arrangements in the populous economies in a context of weak institutions and discretionary policymaking in the absence of a *de facto* independent central bank led to disappointing monetary policy outcomes.

As oil exporters adapt to a new normal of low oil prices, the sustainability of fixed exchange regimes may not be guaranteed without sound macroeconomic institutions. Moreover, Arab policymakers may wish to consider alternative exchange rate arrangements that would be more aligned with their diversification priorities while also providing domestic business cycles with the required flexibility to adjust to shocks. The proposal made by Frankel (2019) to peg the national currency to a basket of e currencies of major trading partners (in particular, the dollar and the euro), but also the price of oil, maybe worth considering.

The paper's findings can inform Arab policymakers about reforms to enhance the effectiveness of monetary institutions in achieving macroeconomic outcomes. Stronger political institutions and effective accountability mechanisms would insulate central banks from political pressures and limit discretionary deviations from announced policies. In the short-term, a rule-based framework could help, especially as *de facto independence* would be hampered by weak implementation of legislations. The institutional framework of monetary policy should be reformed to strengthen central bank autonomy. It is crucial to dissociate monetary policy from political horizons and improve monetary policy transparency to facilitate accountability. The adoption of countercyclical fiscal policies can help smooth fiscal spending and promote fiscal discipline. For the populous group, monetary policy should be supported by efforts to reduce fiscal dominance.

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Table 1: Central Bank Founding Dates

	Founding dates	
	Monetary agency/board (date of creation)	Modern Central Banks
GCC		
Bahrain	Bahrain Monetary Agency (1973)	Central Bank of Bahrain (2006)
Kuwait	Kuwait Currency Board (1960)	Central Bank of Kuwait (1968)
Oman	Muscat Currency Authority (1970), followed by Oman Currency Board (1972)	Central Bank of Oman (1975)
Qatar	Qatar-Dubai Currency Board (1966), followed by Qatar Monetary Authorities (1973)	Qatar Central Bank (1993)
Saudi Arabia (Hejaz)	Hejazi– Najdi monetary system (1928)	Saudi Arabia Monetary Agency (1952)
UAE	Currency Board (1973)	Central Bank of UAE (1980)
Populous countries		
Algeria	Central Bank of Algeria (1962)	
Sudan	Central Bank of Sudan (1960)	
Yemen	Central Bank of Yemen (1971)	

Source: Constructed by the author.

Table 2: Legal central bank laws in Arab oil exporters

Central Bank	Current legislation	Amendments over time
	GCC	
CBB	Central Bank of Bahrain and Financial Institutions Law issued by decree 64/2006	None
CBK	Law on the Currency, the Central Bank of Kuwait and the Organization of Banking Business (32/1968)	Preceded by Amiri Decree (4/1960) for Kuwait Currency Board. Four amendments to current legislations as per decree laws 130/1977, 30/2003, 28/2004 and 64/2007.
CBO	Sultanate of Oman Banking Law in 1974 and Amiri Decree (23 of 1974), replaced by law 114/2000.	2 amendments by royal decrees on the 2000 law 11/2004 and 69/2012.
Qatar	Decree law (15/1993).	3 amendments by laws 36/1995, 33/2006 and 13/2012.
SAMA	3 legislations: (i) SAMA's charter (royal decree 23/1957). (ii) the currency law (royal decree 6/1959) made the Saudi Rial the national currency. A Banking Control law 5/1966 also regulates the banking sector.	One amendment in 1966 related to the banking law.
CBUAE	Union Law 10/1980 for the Central Bank, the Monetary System and Organization of Banking	Preceded by Union Law 2/1973.
	Low-rent per capita group	
BoA	Ordonnance relative a la monnaie et au crédit (OMC) 03-11 (2003)	OMC 03-11 (2003), amended by 09-01 (2009) and by 10-04 (2010).
CBS	Central Bank of Sudan Act 2002	Amended in 2005, 2006 et 2012
CBY	Law 14/2000 on the Central Bank of Yemen	Amended in 2003
CBC	Article decree law No. 486, 22 August 1925. Article 108 of Chapter XIII of the Constitution	

Source: Constructed by the author based on central banks' legislations.

Table 3: Scores on Central Bank Political Independence

	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE	Algeria	Sudan	Yemen	Chile
					Political Independence					
Political independence	0.11	0.10	0.11	0.11	0.15	0.07	0.10	0.12	0.11	0.31
Central Bank Board	**0.18**	**0.31**	**0.18**	**0.18**	**0.00**	**0.18**	**0.30**	**0.24**	**0.18**	**1.00**
Term of office of Governor	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.33	0.00	1.00
Who appoints the Governor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Appointment and term of office rest of the Board	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00
Dismissal of Board members	0.25	0.25	0.25	0.25	0.00	0.25	0.00	0.25	0.25	1.00
CEO allowed to hold another office in government	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Central bank objectives	**0.50**	**0.25**	**0.50**	**0.50**	**1.00**	**0.25**	**0.25**	**0.50**	**0.50**	**0.75**
Price stability	0.50	0.25	0.50	0.50	1.00	0.25	0.25	0.50	0.50	0.75

Note: The index is a weighted average of the individual criteria, using a continuous scale from zero to one, with higher values indicating higher CBI.

Source: constructed by the author based on central bank legislations.

Table 4: Mandates of the Central Bank

Price stability as the sole or primary objective	Price stability plus other objectives, with no indication of priority	
	Financial stability	Economic growth/development objectives
Saudi Arabia	Bahrain, Oman, Qatar, Algeria, Sudan, Yemen and Chile	Kuwait, UAE and Algeria

Source: Constructed by the author based on central bank legislations

Table 5: Scores on Central Bank Economic Independence

Economic Independence										
	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE	Algeria	Sudan	Yemen	Chile
Economic independence	0.28	0.18	0.19	0.40	0.37	0.26	0.31	0.20	0.35	0.47
Policy formulation	**0.60**	**0.33**	**0.40**	**0.74**	**0.00**	**0.74**	**0.90**	**0.60**	**0.74**	**0.80**
Who formulates monetary policy	1.00	0.33	0.67	0.67	0.00	0.67	1.00	0.67	0.67	1.00
Government directives and resolution of conflicts	0.00	0.20	0.20	1.00	0.00	1.00	1.00	0.20	1.00	1.00
Central Bank involvement in debt approval	0.50	0.50	0.00	0.50	0.00	0.50	0.50	1.00	0.50	0.00
Central Bank lending	**0.49**	**0.33**	**0.33**	**0.72**	**0.93**	**0.37**	**0.43**	**0.29**	**0.60**	**0.93**
Limitations on advances	0.33	0.67	0.67	0.67	1.00	0.67	0.67	0.67	0.33	1.00
Lending to Government	0.25	0.00	0.00	0.50	1.00	1.00	0.00	0.00	0.00	1.00
Who decides financing conditions to government	1.00	0.00	0.00	1.00	na	0.61	0.00	0.00	0.00	na
Beneficiaries of Central Bank financing	0.33	0.00	0.00	1.00	na	0.33	1.00	0.33	1.00	na
Interest rates in advances or lending	0.50	0.50	0.50	0.50	na	0.00	0.50	0.50	0.50	na
LOLR	0.75	1.00	0.75	1.00	1.00	0.75	0.75	0.25	0.75	0.00
Financial autonomy	0.67	0.33	0.67	0.67	0.33	0.67	0.67	0.67	0.67	0.67

Table 6: Authority over Monetary and Exchange Rate Policy

Central Bank formulates:		Government formulates:	
Monetary policy	**in consultation with government**	**Monetary policy**	**in consultation with CB**
Oman, Qatar, UAE, Algeria, Sudan Yemen and Chile	Bahrain and Sudan		Kuwait and Saudi Arabia
Exchange rate policy	**in consultation with government**	**Exchange rate policy**	**in consultation with CB**
Bahrain, Algeria, Yemen and Chile	Qatar, Sudan and Yemen	Oman and Saudi Arabia	Kuwait and UAE

Source: Constructed by the author based on central bank legislations.

Table 7: Aspects of Independence

	Goal independence	Goal dependence
Instrument Independence	Algeria and Chile	Oman, Qatar, UAE, and Yemen
Instrument dependence		Bahrain, Kuwait, KSA and Sudan

Source: Constructed by the author based on central bank legislations

Table 8: Central bank advances/loans to the government, purpose of financing and limits

	Purpose of financing	**Ceilings on central bank advances**
Bahrain	Cover seasonal or unforeseen deficits or to provide emergency liquidity.	25 percent of the approved of expenditure of the same FY/ the Central Bank may purchase government debt offered for public subscription if such instruments are not fully subscribed.
Kuwait	Temporary advances to cover deficit.	10 percent of revenue of the preceding FY. Lending to government allowed in the primary markets with no limits.
Oman	Temporary deficiencies in recurrent revenues.	10 percent of the budgeted recurrent revenue of the current FY. Lending to government allowed in the primary markets with no limits.
Qatar	upon a request from the FM	5 percent of the average of revenue of the budget for the last 3 years. QCB can hold government securities traded in the secondary market with no limits.
UAE	Provide liquidity to the Treasury	10% of revenues in the previous FY. Lending to government allowed in the primary markets with no limits.
Algeria	overdraft. Advance is given for external debt management.	240-day overdraft: 10% of ordinary revenues for the previous FY. None specified for the advance for external debt management.
Sudan	Temporary advance.	15% of estimated revenues in current FY. Lending to government allowed in the primary markets with no limits.
Yemen	Temporary advances in the form of emergency loans but only if such loans are not inconsistent with monetary policy objectives.	25% of ordinary revenue for 3 previous FYs. CBY is allowed to purchase government in the secondary market subject to quantity limits of advance.

Source: Constructed by the author based on central bank legislations

Table 9: Central bank advances/loans to the government: maturity

Bahrain	3 months after the end of the FY when such loans were granted (up to 15 months)
Kuwait	"As soon as possible." However, there are restrictions on further borrowing if amounts are not repayed by the end of the FY when such loans were granted (up to 12 months).
Oman	90 days plus restrictions on further borrowing until previous amounts are settled.
Qatar	4 months
UAE	The end of the following FY (up to 24 months).
Algeria	The end of the current FY (up to 12 months). Maturity for external debt advance negotiated with treasury.
Sudan	6 months after the end of the FY (up to 18 months). Potential for extension by agreement between central bank and treasury.
Yemen	6 months. Special loans with longer maturities are given to finance membership fees in international organizations and similar payments.

Source: Constructed by the author based on central bank legislations

Table 10: Central bank advances to the government: interest rates

Central Bank	Negotiated with government	Below market rates	No legal provisions
Bahrain, Qatar	Kuwait, Algeria, Sudan and Yemen	UAE (interest-free)	Oman

Source: Constructed by the author based on central bank legislations

Table 11: Scores on Central Bank Accountability

Accountability										
	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE	Algeria	Sudan	Yemen	Chile
Accountability	0.04	0.02	0.02	0.02	0.02	0.04	0.10	0.10	0.10	0.10
Accountability of Central Banks	0.25	0.25	0.25	0.25	0.25	0.25	1.00	1.00	1.00	1.00
Central Bank transparency	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00

Table 12: Accountability and Transparency of the central bank

Accountability		
Formal appearance before legislature	Submission of a report to the legislative	Submission of a report to the executive and/or publication in the official gazette
Algeria, Sudan, Yemen and Chile	Algeria, Sudan, Yemen and Chile	Bahrain, Kuwait, Qatar, UAE
Transparency		
Financial statements certified by external auditors and published	Financial statements certified by external auditors without publication requirements	No legal requirement for the audit of financial statements
Bahrain, UAE, Algeria, Sudan, Yemen and Chile	Kuwait, Oman, Qatar	Saudi Arabia

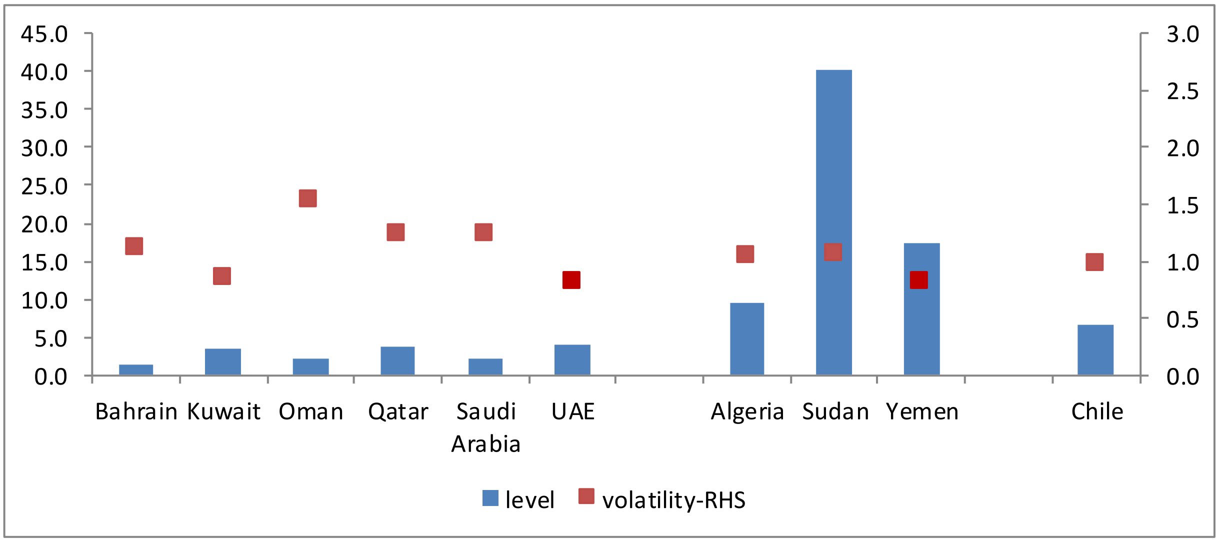
Source: Constructed by the author based on central bank legislations

Table 13: CBI scores

	Bahrain	Kuwait	Oman	Qatar	KSA	UAE	Algeria	Sudan	Yemen	*Average Arab countries*	*Chile*
Overall independence	**0.44**	**0.30**	**0.32**	**0.53**	**0.54**	**0.38**	**0.50**	**0.43**	**0.56**	***0.44***	***0.88***
Political independence	**0.11**	**0.10**	**0.11**	**0.11**	**0.15**	**0.07**	**0.10**	**0.12**	**0.11**	***0.11***	***0.31***
Central bank board	0.18	0.31	0.18	0.18	0.00	0.18	0.30	0.24	0.18	*0.19*	*1.00*
Central bank primary objective	0.50	0.25	0.50	0.50	1.00	0.25	0.25	0.50	0.50	*0.47*	*0.75*
Economic Independence	**0.28**	**0.18**	**0.19**	**0.40**	**0.37**	**0.26**	**0.31**	**0.20**	**0.35**	***0.28***	***0.47***
Policy formulation	0.60	0.33	0.40	0.74	0.00	0.74	0.90	0.60	0.74	*0.56*	*0.80*
Central bank lending	0.49	0.33	0.33	0.72	0.93	0.37	0.43	0.29	0.60	*0.50*	*0.87*
Accountability	**0.04**	**0.02**	**0.02**	**0.02**	**0.02**	**0.04**	**0.10**	**0.10**	**0.10**	***0.05***	***0.10***

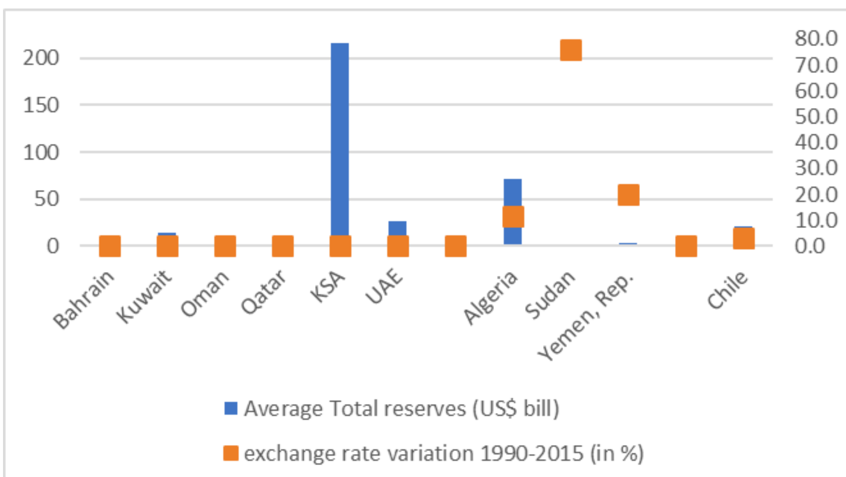
Source: Constructed by the author based on central bank legislations.

Figure 1: Inflation levels and volatility, 1990-2015



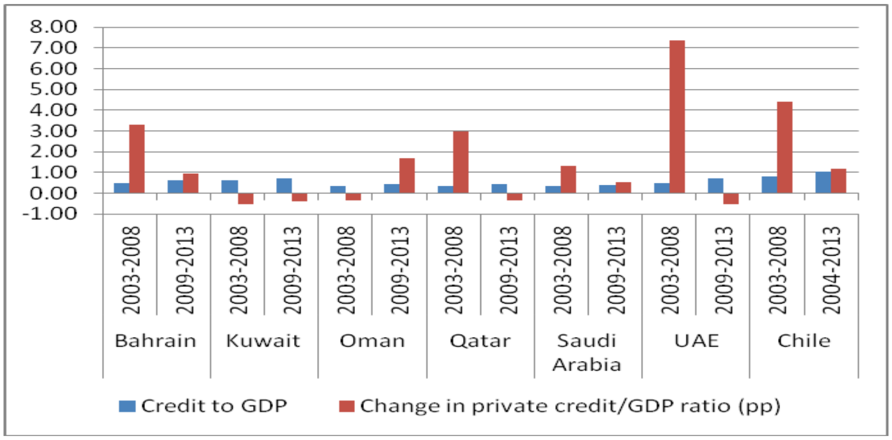
Note: Volatility measured by the coefficient of variation.
Source: Constructed by the author based on WDI da.

Figure 2: Exchange rate variation



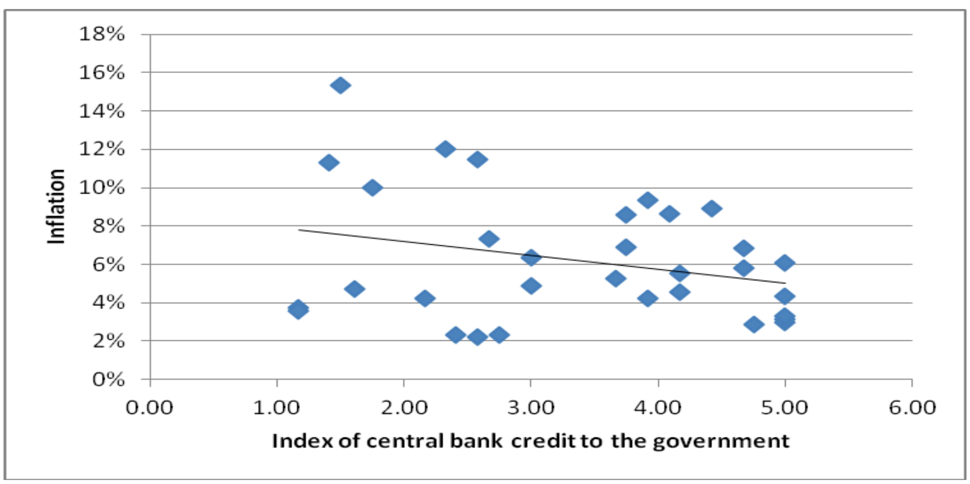
Source: Constructed by the author based on WDI data.

Figure 3: Credit markets in the GCC and Chile



Source: Constructed by the author based on WEO data.

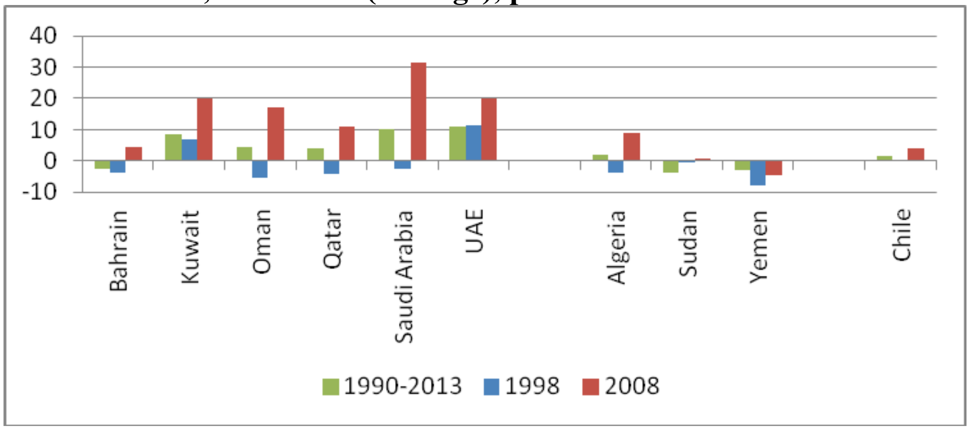
Figure 4: Credit to government and inflation



Source: constructed by the author based on central bank legislations and Jácome and Vazquez (2005). The data exclude Venezuela which is an outlier.

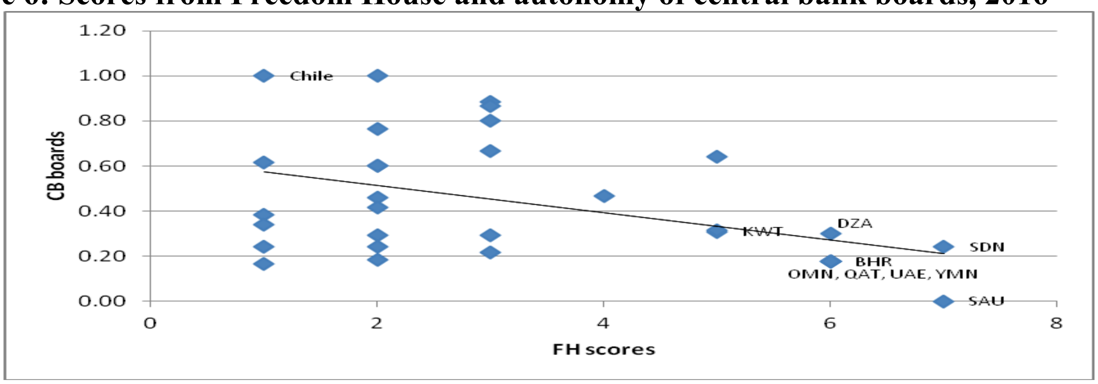
Note: The index of central bank credit to the government is a sub-index from the overall MCI. It ranges from 1, no restrictions on central bank lending to the government, to 6, prohibition of central bank loans to the government.

Figure 5: Fiscal Balances, 1990-2013 (average), percent of GDP



Source: Calculated by authors based on IMF WEO data

Figure 6: Scores from Freedom House and autonomy of central bank boards, 2016



Source: Freedom House
Note: The political rights indicator is based on several subcategories derived from the Universal Declaration of Human Rights which are considered to represent the fundamental components of freedom including: (i) the ability to vote freely in legitimate elections; (ii) participate freely in the political process; (iii) have representatives that are accountable to them. This indicator ranges from 1(the most free) and 7 (the least free). The countries included in this scatter graph are: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE, Algeria, Sudan and Yemen. Non-Arab economies include: Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela

Appendix I

Structure of the Cukierman and the "Modified Cukierman" Indexes

Cukierman Index Criteria (weights)	Values	"Modified Cukierman" Index Criteria (weights)	Values
Political Independence			
Central Bank CEO	**0.2**	**Central Bank Board**	**0.2**
1. Term of office of CEO	**0.25**	**1. Term of office of Governor**	**0.20**
Equal or more than 8 years	1	More than presidential period	1
6 years or more but less than 8 years	0.75	The period does not coincide	0.67
Equal to 5 years	0.5	Same period as the executive branch	0.33
Equal to 4 years	0.25	Less than executive branch or not specified in the law	0
Less than 4 years	0		
2. Who appoints the CEO	**0.25**	**2. Who appoints the Governor**	**0.20**
The Central Bank Board	1	Double process (Executive/Legislative), or through the Central Bank Board if also appointed in a double process, or for longer or overlapped periods with respect to the executive branch	1
Council composed by executive and legislative branch and Central Bank Board	0.75	The executive branch directly or through the Central Bank Board, when this is directly appointed by the executive branch	0
By legislative branch	0.5		
By executive branch	0.25		
By one or two members of executive branch	0		
3. Provisions for dismissal of CEO	**0.25**	**3. Appointment and term of office rest of the Board**	**0.20**
No provision	1	More than presidential period or for a non-defined period	1
Only for non-policy reasons (e.g., incapa incapability, or violation of law)	0.83	For the same period as the President of the Republic with overlap	0.75
At a discretion of Central Bank Board	0.67	Double process for the same period	0.5
For policy reasons at legislative branch's discretion	0.5	Executive and private sector appoint the majority of directors for same period or less	0.25
At legislative branch's discretion	0.33	Executive branch appoints the majority for the same period or less	0
For policy reasons at executive branch's discretion	0.17		
At executive branch's discretion	0		
4. CEO allowed to hold another office in government	**0.25**	**4. Dismissal of Board members**	**0.30**
Prohibited by law	1	Double process approved by the Senate or by a qualified majority and for violations codified in legislation	1

Not allowed unless authorized by executive branch	0.5	By an independent Central Bank Board	0.75
No prohibition for holding another office	0	Double process with simple majority, based on policy decisions or due to subjective reasons	0.5
		By executive branch or subordinated Central Bank Board due to legal reasons	0.25
		By executive branch or subordinated Central Bank Board due to policy or subjective reasons, or no legal provision	0
		5. CEO allowed to hold another office in government	**0.10**
		Prohibited by law	1
		Not allowed unless authorized by executive branch	0.5
		No prohibition for holding another office	0
Central Bank objectives (0.15)	0.15	**Central Bank objectives**	**0.15**
5. Central Bank objectives		**6. Fundamental objective**	**1.00**
Price stability is the only or major goal, and in case of conflict with government, the Central Bank has final authority	1	Price stability is the single or primary objective	1
Price stability is the only goal	0.8	Price stability together with non conflicting objectives but without priority	0.75
Price stability along with other objectives that do not seem to conflict with the former	0.6	Price stability plus others goals including stability of financial system that may conflict with the former, without priority	0.5
Price stability along with other objectives of potentially conflicting goals (e.g., full employment)	0.4	Price stability together with objective of economic growth / economic development with no priority	0.25
Central Bank charter does not contain any objective	0.2	Objectives do not include price stability	0
Some goals appear in the charter but price stability is not one of them	0		
Economic Independence			
Policy formulation	0.15	**Policy formulation**	**0.15**
6. Who formulates monetary policy	**0.25**	**7. Who formulates monetary policy**	**0.50**
Central Bank has the legal authority	1	Central Bank has the legal authority	1
Central Bank participates together with government	0.67	Executive branch holds the final decision on exchange rate policy	0.67
Central Bank in an advisory capacity	0.33	Central Bank participates on monetary policy formulation in an advisory capacity or faces legal limitations on monetary instruments or interest rates	0.33

Government alone formulates monetary policy	0	Government formulates monetary policy alone	0
7. Government directives and resolution of conflicts	**0.5**	**8. Government directives and resolution of conflicts**	**0.30**
Central Bank given final authority over issues defined in the law as objectives	1	Central Bank given final authority over issues defined in the law as objectives	1
Government has final authority over issues not clearly defined as Central Bank goals	0.8	Government has final authority over issues not clearly defined as Central Bank goals	0.8
Final decision up to a council whose members are from the Central Bank, executive branch, and legislative branch	0.6	Final decision up to a council whose members are from the Central Bank, executive branch, and legislative branch	0.6
Legislative branch has final authority	0.4	Legislative branch has final authority	0.4
Executive branch has final authority, but subject to due process and possible protest by Central Bank	0.2	Executive branch has final authority, but subject to due process and possible protest by Central Bank	0.2
Executive branch has unconditional authority over policy	0	Executive branch has unconditional authority over policy	0
8. Central Bank given active role in formulation of government's budget	**0.25**	**9. Central Bank involvement in debt approval**	**0.20**
Yes	1	Approves government debt	1
No	0	Legally required to provide opinion on technical aspects	0.5
		No involvement at all	0
Central Bank lending	0.5	**Central Bank lending**	**0.4**
9. Limitations on advances	**0.3**	**10. Limitations on advances**	**0.15**
Advances to government prohibited	1	Advances to government prohibited	1
Permitted but subject to limits in terms of absolute cash amounts or relative limits (government revenues)	0.67	Limited by small percentage of government revenues or by monetary program	0.67
Permitted subject to relatively accommodative limits (more than 15 percent of government revenues)	0.33	Allowed under lax limits (more than 15 percent of government revenues	0.33
No legal limitations on advances. Subject to negotiations with government	0	Allowed without limits	0
		11. Lending to Government	**0.30**
10. Limitations on securitized lending	**0.2**	Not allowed	1
The same as in 9	1	In the secondary market with restricted limits	0.75
11. Who decides control of terms of lending to government	**0.2**	In the secondary market with lax or without limits	0.5
Central bank controls terms and conditions	1	In the primary market with limits or approved by Central Bank Board with a qualified majority	0.25

Terms of lending specified in law, or Central Bank given legal authority to set conditions	0.67
Law leaves decision to negotiations between the Central Bank and government	0.33
Executive branch alone decides and imposes to the Central Bank	0
12. Beneficiaries of Central Bank lending	**0.1**
Only central government	1
Central and state governments, as well as further political subdivisions	0.67
Also public enterprises can borrow	0.33
Central Bank can lend to all of the above and to the private sector	0
13. Type of limits when they exist	**0.05**
As an absolute cash amount	1
As a percentage of Central Bank capital or other liabilities	0.67
As a percentage of government revenues	0.33
As a percentage of government expenditure	0
14. Maturity of loans	**0.05**
Limited to a maximum of 6 months	1
Limited to a maximum of 1 year	0.67
Limited to a maximum of more than one year	0.33
No legal upper bounds	0
15.Restrictions on interest rates (0.05)	**0.05**
Must be at market rate	1
On loans to government can not be lower than a certain floor	0.75
Interest rate on Central Bank loans can not exceed a certain ceiling	0.5
No explicit legal provisions regarding interest rate in Central Bank loans	0.25
No interest rate charge on government's borrowing from Central Bank	0

In the primary market without limits	0
12. Who decides financing conditions to government	**0.10**
Central Bank defines terms and conditions	1
Defined by law	0.61
The law allows negotiations between government and Central Bank	
Executive decides independently	0
13. Beneficiaries of Central Bank financing	**0.10**
Only the government	1
Government plus local governments	0.67
All of the above plus public enterprises	0.33
All of the above and to the private sector	0
14. Interest rates in advances or lending	**0.10**
At market rates	1
Interest rates not specified in law	0.5
At below market rates	0
15. LOLR	**0.15**
For liquidity purposes with limitations (up to 180 days or up to banks' equity), or no legal provision for emergency lending.	1
Provisions for constructive ambiguity or rediscount of commercial bank loans	0.75
Open assistance to cope with solvency problems	0.25
To finance bank restructuring and/or paying deposit insurance	0
16. Financial autonomy	**0.10**
Government should maintain central capital integrity	1
Government is legally allowed to capitalize the central bank	0.67
The law does not allow the government to capitalize the central bank	0.33
The Central Bank conducts quasi-fiscal operations.	0

16. Prohibition on Central Bank lending in primary market to Government (0.05)	**0.05**		
Prohibition from buying government securities in primary market	1		
No prohibition	0		
	Accountability		
		Accountability	**0.1**
		17. Accountability of Central Banks	**0.75**
		Reports to executive branch and informs at least annually to Congress	1
		Reports to the executive once a year and submits an annual report to Congress	0.75
		Annual report to the executive. Informs to the executive branch whenever fundamental disequilibria emerge, or reports through the media without specific periodicity	0.5
		Issues annual report at specific time	0.25
		Distributes an annual report without establishing particular period of time for it	0
		18. Central Bank transparency	**0.25**
		Discloses detailed financial statements at least once a year with a certification of an independent auditor	1
		Discloses consolidated financial statements at least once a year with seal of the Banking Superintendent or other public sector authority	0.75
		Discloses financial statements at least once a year, certified by an internal auditor	0.5
		Publishes partial financial statements	0.25
		Does not publish financial statements or the law authorizes the central bank to deviate from international accounting standards	0