Overlapping Sectors: 
Botswana’s Inoculation Against the Dutch Disease?

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Abstract

Most countries that rely heavily on a single valuable commodity have difficulty managing the fluctuations in income associated with these goods, typically treating booms as if they were permanent increases in income. The frequent result – known as Dutch Disease – is characterized by overvaluation of the exchange rate, relatively expensive labor costs, and expansion of the service sector. Botswana has not entirely avoided these symptoms, but has kept them in check. Although good policies are a key element in Botswana’s economic success, the origin of such policies is not very clear. We develop a spatial model to demonstrate how an alignment of interests between policy-makers and export interests allowed Botswana to limit the effects of the Dutch Disease and foster high economic growth. In Botswana, the public sector’s involvement in the export of cattle provided incentives to adopt monetary and fiscal policies that maintained a relatively neutral real exchange rate. Indeed, avoiding real appreciation of the exchange rate was an important tool used by civil servants to protect their revenues from cattle exports. The overlap of the public and export sectors created personal benefits for policy-makers that generated substantial and positive spill-over effects for the whole country. The case of Botswana suggests that the extent of overlap between policy-makers and exporting sectors may help account for cross-national variation in economic performance among countries susceptible to the Dutch Disease. We also note long-term socio-economic changes and discuss their implications for the survival of anti-appreciation policy.

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Overlapping Sectors: Botswana’s Inoculation Against the Dutch Disease?

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Countries with highly valuable export commodities, such as oil or minerals, experience upward pressure on their exchange rates. Those that allow their currency to appreciate often see their blessing become a curse, known as Dutch Disease. Currency overvaluation hampers development of other tradable sub-sectors by undermining their ability to compete domestically against imports and in international markets. The result is substantial imbalance in the structure of the economy and an increased vulnerability to price fluctuations in the booming sector. Non-traded sectors like services, construction, and commerce depend directly and indirectly on revenues from the booming sector; these secondary booms cannot be sustained if the booming sector falters. If tradable sectors do not hold their own during the boom, there is little for the economy to fall back on after a bust.

Anecdotal evidence of Dutch Disease is abundant. Zambia enjoyed rapid growth associated with increases in copper prices in the 1950s and 1960s but witnessed increases in labor costs and decreases in productivity that crippled the economy once copper prices collapsed in the early 1970s. In the Netherlands, other tradable sectors shrank in the 1970s in response to growth in natural gas. Several oil exporting countries experienced difficulties in economic development during and after the oil boom of the early 1970s. The productivity of non-oil tradable sectors declined in Nigeria and Mexican and Venezuelan non-oil sectors had difficulty competing with less expensive imports. Typical

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2 The name was coined by the Economist in 1977. But the problem itself is much older. Davis (1995) notes that in 1859 economist John Elliot Cairns described the same effect in Australia following the gold rush of the 1850s.
of Dutch Disease victims, many oil exporting countries which experienced surges in income with the 1970s oil price shocks later suffered difficult periods of adjustment and debt crises as oil prices dropped again in the 1980s. In fact, significant economic problems often emerged even before oil prices declined (Karl 1997).

Yet Dutch Disease is not inevitable. A number of countries have experienced sustained economic growth despite heavy reliance on mining (World Bank 2002). Arguably, economic performance in mining economies is a product of macroeconomic policy. Governments choose whether to consume, invest, or save additional revenues from a booming sector.³ Consumption of additional revenues on prestige projects (e.g., palaces, fancy cars) has no economic benefit; governments that minimize such expenditures reduce their vulnerability to Dutch Disease. Strategic investment in productivity in the manufacturing sector and the diversification of exports can promote forms of growth that can support the economy when the resource boom ends. A variety of theories has promoted state-led development, whether as a way to overcome bottlenecks in production (Hirschman 1981) or overcome entrenched patterns of dependency (Evans 1979; Prebisch 1959). Although Import Substitution Industrialization has met with no more than mixed success (Bruton 1998; Waterbury 1999), the value of other forms of state-led development, especially promotion of export production, remains a subject of debate (e.g., Amsden 1985; Bates 1989; World Bank 1993). In the case of countries experiencing mineral booms, however, Karl (1997) argues that state-led efforts to diversify the economy actually increase reliance on mineral rents and result in unsustainable forms of diversification.

In theory, restricting the immediate flow of new revenues into the domestic economy can limit the effects of Dutch Disease (Auty 2001; Neumayer 2004 1629; Ross 1999; Shaxson 2005 319; World Bank 2002 3). Strategies for income smoothing can take a variety of forms. Governments can buffer their economies against the vicissitudes of

³The focus here, and in much of the literature, is on situations when revenues from a booming sector are funneled through the government. This is very common with minerals such as oil and diamonds.
international commodity markets by using commodity stabilization funds and careful fiscal policies. They can place their windfalls in foreign currency to keep their exchange rate from appreciating. Some oil producers set up programs to provide loans or foreign aid to other countries during the 1970s (e.g., Venezuela, as discussed by Karl 1997 and Saudia Arabia, discussed by Auty 2001).

The puzzle, then, is not really one of how the negative effects of Dutch Disease can be reduced. Rather, given that a reasonable understanding of the economic problem exists, the puzzle concerns the politics driving the choice of polices for managing resource booms. Many countries, such as Nigeria and Mexico, find it difficult to adopt or implement policies that would limit the effects of Dutch Disease. Fiscal restraint is politically difficult under any circumstances; the rising demand for government expenditures that accompanies a resource boom is predictable (Karl 1997; Ross 2001; Shaxson 2005). Why then do some countries, such as Botswana, overcome political pressures to spend their new income now and adopt more conservative macro-economic policies that protect long-term economic growth? Do the successes experienced by these countries offer transferable lessons? And, are the conditions that favor sound macroeconomic management of resource booms stable over the long-term?

We take up these questions with an in-depth analysis of Botswana. As an exporter of gem quality diamonds and copper-nickel since the early 1970s, Botswana was a prime candidate for Dutch Disease yet experienced limited symptoms. For the most part, Botswana has maintained a stable real exchange rate and accumulated foreign reserves during boom years. As noted above, these policies are available to all mineral exporters, but are rarely adopted because they are politically difficult.

Botswana’s adoption of cautious macroeconomic policies has been rewarded. The country has maintained a rapid pace of economic growth over more than three decades and boosts one of the fastest growing economies in the world (see Table 1). Three decades after Botswana’s discovery of diamonds, the World Bank ranked it as “best in

Unlike other analyses of Dutch Disease and the broader resource curse (see below) that have focused on the status of state-building at the time of a resource boom (Karl 1997; Ross 2001), policies (Harvey 1992; Harvey and Lewis 1990; Shaxson 2005; World Bank 2002), or whether institutions create incentives for investment (Acemoglu et al. 2003; Wright and Czelusta 2003), we emphasize the importance of domestic political coalitions and international constraints. Although intuitively plausible, the state-building argument does not offer much insight into Botswana’s success. The argument claims that the best management of resource booms should occur in countries with well-established state structures and transparent processes (Karl 1997). Yet diamonds became an important source of government revenues in Botswana within a few years after independence, during the early stages of state-building. Although the country’s institutions have been praised for their stability and openness, any claim that they were well-established so quickly after independence stretches the concept of state-building. Policy choices and domestic political institutions are clearly important. It is widely recognized that the adoption of good policies must itself be explained. An explanation that attributes sound policies to institutions (e.g., Acemoglu et al. 2003) is not complete in the absence of a political explanation for the adoption of favorable institutions.
Because they are products of politics, policies and institutions are subject to change as political conditions change. Institutionalization creates a lag in the effects of changing political coalitions and path dependency constrains the direction of political change, but institutions do not eliminate the effects of changing political conditions. As underlying political conditions change, outcomes can change dramatically even in the context of stable institutions. In the case of Botswana, economic growth has led to structural changes that have increased the variety of interests in society and opened up possibilities for new coalitions. The fact that past political coalitions favored competitive exchange rates does not guarantee that future coalitions will adopt similar policies.

In this paper, we explore both domestic and international constraints on exchange rate policy in Botswana. The expectation of Dutch Disease is based upon assumptions of antagonistic, or at least non-cooperative, relationships between tradable sectors—exporters of commodities—and non-tradable sectors—the civil service, among others. Because non-tradable sectors enjoy less expensive imports and are not hurt by competition from exports, many observers expect support for competitive exchange rates to decrease as the public sector grows. In Botswana, the prominence of the cattle industry, both as a traditionally important export industry and as a favored form of investment for public sector employees, discouraged the overvaluation associated with Dutch Disease.⁴ Two sectors expected to have opposing policy preferences regarding monetary policy, the public and agricultural sectors, have in fact overlapped. We argue that these overlapping sectors provided the foundation for a strong coalition that favored competitive exchange rates.⁵ We also show how international factors reinforced preferences for lower exchange rates by limiting options for monetary and trade policy.

Botswana's membership in the Southern African Customs Union (SACU) with South

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⁴Cattle has been the main agricultural assets of the inhabitants of Botswana since pre-colonial times (Schapera 2004, p. 214). The depiction of Botswana’s civil servants and politicians as cattle owners has become the conventional wisdom (Harvey 1992; Picard 1980; Samatar 1999). See below.

⁵Parson (2004) also attributes Botswana’s economic success to the influence of cattle ownership among Botswana’s policy-makers, but emphasizes cross-class interdependencies associated with the traditional pastoral production system rather than interests in exporting.
Africa, Lesotho, Namibia, and Swaziland prevented development of an independent trade policy; since trade and exchange rate policies are viewed as alternative tools for developing competitive industries, limits on one directs attention to the other.\footnote{\textquotedblleft The simultaneous imposition of import tariffs and export subsidies will replicate some of the effects of a devaluation	extquotedblright{} (Edwards 1988, 31). But trade and exchange rate policies are not perfect substitutes. See Edwards (1988, 31-32) for further details.} The political overlapping of involvement in sectors with distinctive economic characteristics and the Botswana’s membership in the SACU help explain the adoption of policies to which many observers attribute Botswana’s economic successes (Acemoglu et al 2003; Hartland-Thunberg 1978; Harvey 1992; Harvey and Lewis 1990).

We tackle three issues: (1) what the Dutch Disease entails, whether it actually exists, and why is thought to occur; (2) whether Botswana shows symptoms of Dutch Disease; and (3) the domestic and international factors influencing Botswana’s response to its diamond revenues. We begin by delineating the Dutch Disease phenomenon and the risks associated with it. We then discuss standard explanations of the politics driving Dutch Disease and draw connections with theories of sectoral politics. Next, we demonstrate Botswana did not experience the main symptom of Dutch Disease, a real currency appreciation, at least until recently. Third, we pinpoint factors which enabled Botswana to perform relatively well economically despite the temptation presented by large export earnings. Overlapping participation in the cattle industry and the public sector - rather than the sectoral divisions implicitly assumed in much of the literature - shaped policy preferences while international institutions and economic openness constrained policy options. The combination limited the range of feasible policies and diminished the pressures that typically result in Dutch Disease.

**Dutch Disease and the Resource Curse**

Dutch Disease is “the coexistence within the traded goods sector of progressing and declining, or booming and lagging, sub-sectors,” in which the advantaged or booming sub-sector is extractive while all other tradable sub-sectors, particularly manufacturing, are disadvantaged (Corden and Neary 1982, 825). In standard economics...
discussions, revenues from extractive sectors are treated as transfers from the world, with no domestic cost. The transfer raises current and future real domestic income and expenditure. Prices for traded goods are unaffected by increased domestic expenditure because they are set by the world market, but the relative price of non-tradable sectors increases in response.\footnote{Sachs and Warner show evidence that resource-abundant countries tended to be high-priced economies and that, partly as a consequence, this countries tended to miss-out on export led growth (2001, 837).} The result is current and future real appreciation.\footnote{The real exchange rate is defined as the ratio of the relative price of tradable goods over the relative price of nontradable goods. Consequently, if the relative price of nontradables increases, this ratio decreases, representing the greater purchasing power of the currency, and there is real appreciation.} Real appreciation is not problematic if international transfers - revenues from the extractive sub-sector, that is - are permanent. Most extractive goods, however, are subject to booms and busts (Howie 2001).\footnote{Unstable prices have been common historically for both renewable and nonrenewable natural resources (Cashin et al. 2002).} If a good is subject to booms and busts, the flow of revenues it generates should be treated as temporary. In other words, expenditure in each period should be consistent with the permanent increase in income (see van Wijnbergen 1984b). Under these circumstances, anything more than a relatively modest real appreciation means overvaluation.

The sudden surge in revenues associated with exporting a highly valuable commodity poses problems for sustainable development. Available funds attract demands for expenditures - or rent-seeking (Karl 1997; Ross 2001; Shaxson 2005). Meeting demands in a manner that leads to increased labor costs, an appreciated currency, and consumption of economic rents rather than investment in capital formation, puts non-boom tradable sectors at a severe disadvantage in the international economy. Commodities that generate economic rents on this scale tend to be natural resources.

The Dutch Disease represents one component of a broader phenomenon: the “resource curse,” which suggests that countries with abundant oil or mineral resources tend to achieve lower levels of GDP per-capita and experience limited political development. Sachs and Warner (1999), for example, provide evidence from seven Latin
American countries where natural resource booms are sometimes accompanied by declining per-capita GDP. Indeed, the resource booms in Bolivia, Mexico, and Venezuela did not permanently raise the level of per-capita GDP and were followed by a growth slowdown rather than increase (1999, 64). In a later article, Sachs and Warner (2001) present further evidence of a resource curse. Natural resource abundance (natural resource exports / GDP) had a consistent negative effect on growth per-capita from 1970 to 1989 in a sample of 93 countries when controlling for the initial level of income, the degree of openness of the economy, and geographic variables (2001). Dutch Disease and the resource curse are related in that economic explanations of the resource curse generally identify Dutch Disease as main mechanism driving poor economic performance (Auty 2001; Shaxson 2005).\(^{10}\) The currency overvaluation and sectoral imbalance associated with Dutch Disease exacerbates the need for economic restructuring during bust periods, driving down long-term economic performance.

A number of scholars also draw a connection between reliance on highly valuable natural resources and stalled political development. Ross (2001) argues that the availability of mineral rents reduces the dependency of rulers on their citizens. State control of mineral rents increases the capacity for repression. In addition, decreased reliance on taxes undermines the capacity for popular checks on the exercise of power. Thus, from Ross’s perspective, mineral rents represent an important obstacle to democracy. Even if democratic rule is possible in countries experiencing resource booms, state development may atrophy (Karl 1997). Political contestation tends to focus on control over rents, with political support purchased through the distribution of rents. In democracies and authoritarian regimes alike, the easy availability of cash reduces incentives for investment in state-building and other forms of institutional development.

\(^{10}\) Davis (1995) argues that Dutch Disease refers only to the coincidence of booming and lagging sectors and really has no bearing on the long-term performance of resource dependent economies.
The broader literature concurs that rentier politics undermines state development and prospects for democratic governance (e.g., Boone 1990; Reno 1999). Others have questioned the existence of a resource curse. Davis (1995), for example, finds no evidence of a resource curse in a comparison of 22 mineral economies with 37 never-mineral economies. Divergent findings for different samples raise methodological questions about sampling, data availability, and operationalization of key concepts. Wright and Czelusta (2003) point out that, although resource abundance is typically measured in terms of known reserves, known reserves reflect investments in exploration and technological development as much as actual resource endowments. Any apparent relationship between resource endowments and economic development likely reflects characteristics of the broader policy environment that influence investment in research and development. Even if the resource curse ultimately proves to be a misperception based on prominent cases, Dutch disease effects do exist. The resource curse claims that resource abundant countries experience lower long-term economic performance. Dutch Disease refers to the consequences of exchange rate movements driven by a booming sector for the structure of the economy. Earnings associated with many natural resources are highly volatile and presents a significant macro-economic challenge with important political implications. An acknowledgement that countries vary in their response to this challenge changes the research question but does not eliminate it.

**Political Sources of Dutch Disease**

As noted above, Dutch Disease can be avoided by smoothing inter-temporal expenditure and preventing overvaluation. Too often, countries experiencing resource booms either fail to set up mechanisms for inter-temporal expenditure smoothing or do not fully utilize the mechanisms that exist. Many countries experiencing a resource boom do little or nothing to prevent or compensate for real currency appreciation. When new

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11 Van de Walle (2001) makes a subtle distinction between rent-seeking and rent-provision, but agrees that rentier politics is a problem for development.
revenues are allowed to surge into the economy and the currency is allowed to appreciate, the country will consume its economic rents during the boom period and remain as undeveloped as ever once the boom ends or the resource is exhausted. The imbalance in economic structure associated with overvaluation magnifies the shock of adjustment in the wake of a boom. The extent to which a country suffers from Dutch Disease, then, depends on the policy choices of its government. Most political explanations of Dutch Disease and the broader resource curse phenomenon focus on state-building and institutional development. We argue that sectoral theories of politics are implicit in both the political and economic literature on the resource booms and question the assumption that relevant political groups always have a clear sectoral identification.

_Institutional Development and State-Building_

The conventional wisdom in economics attributes economic development, regardless of resource endowment, to policies and institutions that provide tenure security. Secure property rights encourage investment (Alchian and Demsetz 1973; De Soto 2000; North 1990; Holcombe 2001). Good institutions or “institutions of private property” have three components (Acemoglu et al. 2003 84): (1) they encourage investment by protecting property rights for a wide cross-section of the population; (2) they provide the basis for political stability, and (3) they provide effective constraints on the exercise of political leadership. Institutions of private property create confidence that property rights for a broad cross-section of the population will be protected from expropriation, whether by the state or elites, or others (Acemoglu et al. 2003 86). Acemoglu et al. (2001) report a cross-national strong correlation between institutions that provide protection from expropriation and economic performance. The relationship holds even when a variety of control variables are added to the model, including measures for

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13 Even those who do not accept the need for private property as _individual_ property insist on the importance of _secure_ and _well-defined_ property rights (e.g., Ostrom 1990).
natural resources. Botswana no longer appears as an outlier when economic performance is modeled as function of institutions of private property (Acemoglu et al. 2003, 87 – 89).

If policies or institutions account for variation in economic performance, what explains cross-national variation in policies and institutions? Institutional explanations tend to trace institutions today to institutions in the past (North 1990). Karl (1997) points to the degree of state-building at the time oil is either discovered or the country experiences its first oil boom as an explanation for Dutch Disease and associated political problems in oil-exporting countries. Although her argument and data concern oil exporters, the general argument should apply in countries experiencing other types of resource booms, especially those involving minerals. State-building involves the development of institutions for mobilizing and distributing resources, establishing effective control throughout the territory, and developing the capacity to make and implement policies. In the absence of oil or other highly valuable natural resources, a government must generate revenues through taxation. The imperative of accessing a broad tax base drives the development of state structures that extend throughout the territory; dependence on the domestic economy for state revenues also encourages the adoption of policies that promote economic growth.

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14 The natural resource measures include percent of global known reserves in gold, iron, and zinc; the number of minerals in a country; and oil resources per capita (Acemoglu et al. 2001 1390). Since these measures do not capture the weight of highly valuable resources in export earnings, they are not good controls for Dutch Disease dynamics.

15 The indicators are “average expropriation 1985 – 95” as measured by Political and Risk Services and Polity IV’s measure of constraints on the executive.

16 Karl argues that the magnitude of the dynamics should be stronger in petro-states than other states, and that there is a qualitative difference between minerals and other leading commodities (1997, 238). Her analysis of Venezuela, however, suggests that similar dynamics influenced state development when the leading sector was coffee as when the leading sector was oil (Karl 1997, Part II).

17 This ignores the possibility of foreign aid. Foreign aid is, of course, of considerable importance for some countries. Its availability is closely tied to geopolitical considerations and most countries cannot count on aid alone as an adequate source of revenues. Parallels can be drawn between foreign aid and highly valuable natural resources. Both are unpredictably volatile sources of significant revenues and are associated with rentier politics (cf., van de Walle 2001).

18 There is a well-established tradition of linking state-development to the need for revenue generation. In addition to Karl (1997) and Ross (2001), see, for example, Levi (1988), Olson (2000), and Tilly (1975, 1985), and van de Walle (2001).
If a highly valuable natural resource like oil or diamonds is available, however, mineral rents present an alternative revenue source. The relative ease of capturing mineral rents discourages the development of institutions for broad-based taxation if they do not already exist.\textsuperscript{19} When minerals are concentrated, there is also less incentive for development of state institutions that effectively extend throughout the territory (Karl 1997). But once a government becomes dependent on revenues from a booming resource, it becomes difficult to switch to alternative revenue sources. The concentration of resources in the hands of the government also encourages rent-seeking. Because of the relative ease of building political support through the provision of rents, politicians typically show little restraint in responding to rent-seeking. In a country experiencing a resource boom, pervasive rent-seeking creates patterns of socio-economic organization that increase dependency on the continued flow of mineral rents; as the portion of society dependent on mineral rents increases, the political costs of fiscal constraint also increase (Karl 1997).

Pointing to the Norwegian experience with oil, Karl (1997) argues that countries that have developed extensive and effective states before they experience a resource boom are better able to exercise restraint. These governments already have established revenue bases, their political supporters are not dependent on mineral rents and may even have strong interest in export sectors, and their bureaucracies can rely on established operating procedures when figuring out how to manage the resource boom. Norway did not avoid symptoms of Dutch Disease altogether, but was able to recognize signs of trouble and make rapid adjustments to minimize those effects. Although Norway differs from the other oil-producing states in her study on many dimensions, Karl (1997) attributes Norway’s superior macroeconomic management of its oil revenues to advantages associated with state development.

\textsuperscript{19} The assumed ease of capturing mineral rents reflects an assumption that the minerals in question are concentrated, as with seams or pipes, or that points of access are limited, as with oil wells. When highly valuable resources are less easily controlled, as with the alluvial diamonds in Sierra Leone (Reno 1999), it is much more difficult for the government to capture mineral rents.
Where Karl (1997) implicitly assumes that governments depend on social bases of support, even in authoritarian systems and even during resource booms, Ross (2001) argues otherwise. He contends that the easy availability of mineral rents in oil producing countries decreases government reliance on popular support. Because governments in these countries do not depend on broad-based taxes, they face less pressure to cultivate a cooperative relationship with citizens. Moreover, mineral rents make repression more affordable. From this perspective, resource booms – again, especially in oil producing countries – are particularly pernicious in countries with low levels of prior development. The absence of a sizeable middle class with independent sources of revenues means that there is little social mobilization to check increasing authoritarianism. Because resource booms either leave the underlying structure of the economy unchanged or promote the creation and expansion of a rentier class, there is little prospect that an independent middle class will emerge.

In Ross’ (2001) analysis, low prior levels of political and economic development set the stage for authoritarian rule in countries experiencing resource booms. Although Ross focuses on the political aspects of the resource curse, the political economy literature suggests that regimes that are not responsive to a broad swathe of the population are less likely to adopt policies that promote economic growth (e.g., Olson 2000). This implies that such countries are more likely to experience Dutch Disease.

Although they do not present it as state-building, Acemoglu et al. (2001, 2003) emphasize the relationship between institutional development and economic development and highlight the legacy of colonialism. They argue that colonial powers were more likely to introduce protections for private property in settler colonies; those institutions tended to stay in place once adopted (2001). The presence of settlers was, in turn, a reflection of relative mortality rates during the age of colonialism. In the case of Botswana, which was not a settler colony, Acemoglu et al. (2003) offer a multi-faced explanation for the adoption of good institutions after independence that emphasizes the
importance of relatively unobtrusive colonial rule and participatory pre-colonial institutions. These arguments share with state-building theories a concern with accountability, but are less attentive to the challenge of building an effective and integrative administrative apparatus. The institutional economists (Acemoglu et al. 2001, 2003; North 1990; Olson 2000) also tend to take a longer historical view than their political counterparts. Yet, despite differences in the particulars of their arguments, Karl (1997), Ross (2001), and Acemoglu et al. (2001; 2003) all suggest that prior political development is the most important predictor of policy responses to a resource boom.

*Making Assumptions of Sectoral Politics Explicit*

Expectations that sudden increases in state revenues from extractive sectors will lead to rapid expenditure and heightened domestic costs are based on observed behavioral patterns and economic formulae. With their emphasis on the distinction between tradable and non-tradable sectors, they are also consistent with theories of sectoral politics. Economists recognize that different monetary and tariff policies are in the interest of various sectors according to each sector’s position vis-à-vis the international economy (e.g., tradable or non-tradable). Monetary and tariff policy preferences are expected to be cohesive within sectors, rather than fractured by class or other socio-economic identities.

This view is compatible with theories of sectoral politics (Gourevitch 1977; Frieden 1991; 1994). One may suspect that sectoral politics would become irrelevant with high capital mobility, since increased mobility implies greater ease in reallocating assets across sectors in response to changes in economic conditions. But, because levels of capital mobility and asset specificity are uneven across sectors, sectoral politics continue to be important (Frieden 1994). In fact, Frieden (1994) expects exchange rate policy to become increasingly prominent politically with increases in financial and

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20 Ross (1999, 309) describes the political behavior to increase spending as a cognitive explanation of the resource curse. Resource wealth causes a type of myopia among public or private sectors. This notion has a distinguished history, appearing in the major works of Machiavelli, Montesquieu, Adam Smith, and Jean Bodin.
commercial openness. Interest groups, defined in terms of sectors and international or domestic orientation, have contrasting preferences terms of both exchange rate levels and stability. Consistent with the discussion above, people involved in traded sectors are expected to prefer a somewhat depreciated exchange rate and those in non-traded sectors to prefer an appreciated exchange rate. International orientation fosters a preference for exchange rate stability, regardless of the exchange rate level. Given this trade-off, Frieden expects all producers of tradable goods to prefer a relatively under-valued currency, with exporters also concerned with the stability of the exchange rate. Non-traded sectors prefer an over-valued currency that lowers the costs of imported inputs and consumption goods. Frieden notes that particular interest groups differ in the priority given to exchange rate levels and stability. Thus, international investors prioritize currency stability while domestically oriented participants in non-tradable sectors, such as public sector employees, are more concerned about exchange rate levels (1994 86). Figure 1 depicts predicted preferences of sectorally defined interest groups over exchange rate levels and stability.

By predicting that booming tradable sectors will be favored over non-booming tradable and non-tradable sectors, Dutch Disease expectations rest upon an assumption that sectoral politics dominate policy-making and that the balance of power among interests can be predicted from a country’s economic structure. In a more general context, Shafer (1990) argues explicitly that structural characteristics of particular sectors influence the organization of interest groups and thus choices of policies and institutions (cf., Karl 1997). As Gourevitch notes, however, sectoral politics “presupposes a certain obviousness about the direction of economic pressures upon groups” and lacks a theoretical mechanism to link economically derived preferences to political alliance formation and actual influence over policy making (1977 306-307). Frieden’s schema (1991, 1994) goes beyond the usual division between traded and non-traded sectors,
recognizes that different groups emphasize different aspects of exchange rate policy, and thus draws attention to possibilities for coalitions and compromises. Nonetheless, sectoral theories of politics downplay the importance of factoral/class divisions and do not grapple with the possibility of overlapping sectoral membership and their consequences for policy preferences (Brawley 1997).\textsuperscript{21} Just as workers who invest in the stock market do not represent the abstract interests of pure labor or pure capital, individuals active in multiple economic activities may be involved in both traded and non-traded sectors. If economic diversification at the individual level is widespread, predictions of sectorally defined interest group politics based on a country’s leading sector are unlikely to hold.

Overlaps in sectoral membership are central to the political economy of Botswana. In response to risks inherent in Botswana’s arid environment, individuals and families have long spread risks through diversification of economic activities. Historically, diversification meant participation in crop and livestock production, supplemented by hunting, gathering, crafts and other handwork. As mines and urban centers developed in the region, labor migration became important. Labor migrants continued to participate in and support rural economic activities by sending remittances, investing in livestock, and eventually retiring into agriculture (Parson 1981). Politicians and civil servants as well as mine workers engage in this sort of economic diversification at the individual and household level.

By implication, politically dominant policy preferences are not formed according to membership in a one particular sector or another, but by people with multiple sectoral memberships making trade-offs between partially contradictory interests. In Botswana, civil servants and politicians benefit from mining revenues channeled through the government. These groups then invest in other economic activities. For the first decade or so after independence, politicians and civil servants favored the livestock industry. The dual position of policy-makers in the non-tradable sector as bureaucrats and in the

\textsuperscript{21} On trade policy as a product of factoral politics, see Rogowski (1989).
traded sector as livestock producers provided the basis for an anti-appreciation policy preference. Politicians and bureaucrats need not overcome a collective action problem and compete for access to policy makers since they are themselves policy makers and executors. When assuming the prominence of interest group politics divided along sectoral lines, Botswana’s relative avoidance of Dutch Disease appears inexplicable. Once that assumption is dropped and the implications of overlapping sectoral membership are explored, the case loses its mystique.

**An Examination for Dutch Disease in Botswana—Historical Review**

At independence in 1966, Botswana was a poor country dependent upon cattle exports and remittances from migrant labor at South African mines. The early 1970s brought growing contributions to GDP from mining, as illustrated in Figure 2. Since the early 1980s, mining has generated between one-third and half of GDP. Although Botswana’s mining efforts include extraction of copper-nickel since 1974 and soda ash since 1991, diamonds account for the largest proportion of export earnings. This situation, in which a country experiences a commodity boom, offers the classic conditions for Dutch Disease.

![Insert Figure 2 here](image-url)

For a number of years, Botswana lacked independence in both monetary and tariff policy-making. Instead of introducing its own currency at independence, Botswana used the Rand as a member of the Rand Monetary Area, which included South Africa (and Southwest Africa, now Namibia), Lesotho, and Swaziland. This arrangement is similar to pegging one currency to another, with the ratio binding at a one-to-one exchange. Historically Botswana dependent on South African imports (69.2% of all imports in 1973 and 85.2% in 1977 [Ochieng 1981]) and remittances from migrant workers, Botswana placed a premium on the benefits of easier and more stable transactions. As a trade-off

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22 Even today, most of Botswana’s imports originate within the SACU region. Between 1997 and 2001, an average of 75% of all of Botswana’s imports came from SACU countries (CSO nd).
for stability in transactions, Botswana gave up control over exchange rate policy to South Africa until creation of the Pula as the national currency in 1976.

Botswana forfeits independent tariff policy for membership in the Southern African Customs Union (SACU), again including South Africa, Lesotho, Namibia, and Swaziland. A renegotiated SACU agreement went into effect in 2004 (Kirk and Stern 2005; Interview 2005 66 DP). The 1969 agreement guided SACU operations during the period under consideration here. The SACU erects a common tariff wall between member countries and the rest of the world. The South African Board of Tariffs and Trade ultimately set external tariffs; the Board of Tariffs had to “consult” with other members but did not require their approval. Any member country could veto the separate entrance of any other member country into a concessionary trade agreement with a non-member state (Hudson 1981; Kirk and Stern 2005). Consequently, South Africa’s priorities determined tariff policies for Botswana and other SACU members. Given South Africa’s commitment to import substitution from 1925 until the end of apartheid (Gibb 1997), tariff barriers were more easily raised than lowered. The arrangement brought tangible benefits to member countries in the form of a share of import duty revenues. Although some analyses have shown that these revenues did not fully compensate for welfare losses associated with participation in SACU (Leith 1992; Gibb 1997), customs revenue makes a significant and stable contribution to government revenues (Gibb 1997). As reported in Table 2, revenues from SACU accounted for about a third of the government of Botswana’s budget through the 1970s. More recently, customs revenues represent a more modest but still significant contribution to the government budget.

[Insert Table 2 here]

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23 The new institutional arrangements are still being organized (Interview 2005 66 DP). See Kirk and Stern (2005) for an overview of the new agreement and how it compares with the prior arrangement.
24 There were some amendments, but they did not substantially affect tariff arrangements. The most significant amendment modified the revenue distribution arrangement in 1976 (Gibb 1997). See below.
25 South Africa entered several bilateral trade agreements, most recently with the EU in 2000 (Kirk and Stern 2005 186).
When diamond exports commenced with the opening of the first mine at Orapa in 1971, Botswana was unable to experience the exchange rate appreciation associated with Dutch Disease because it had no independent currency. Nor could Botswana substitute tariff policy for exchange rate policy because of its membership in the SACU. In 1976, a year before a second diamond mine opened at Letlhakane, Botswana introduced its own currency, the Pula. Greater control over the economy and increasing divergence between the needs of the South African and Botswana economies were the rationales given for Botswana's exit from the Rand Monetary Area (Harvey and Lewis 1985; Hermans 1997).

With the Pula came the possibility of real currency appreciation, the primary symptom of Dutch Disease. In an effort to maintain stable transactions with South Africa, Botswana adopted relatively cautious exchange rate policies. After holding the Pula equal to the Rand for its initial 100 days (to facilitate the transition), the Pula was pegged to the US dollar. Since the Rand was also pegged to the dollar until 1979, the Pula was effectively pegged to the Rand as well. In 1980, the Pula followed South Africa by dropping its dollar peg in favor of a peg to a trade-weighted basket of Standard Drawing Rights (SDR) and the Rand. The basket of currencies has since been expanded to include the US dollar, the Euro, and the Swiss franc, among others. The peg against a trade-weighted basket of currencies remained in place until May 2005, when Botswana adopted a crawling peg (Gaolathe 2005).

Membership in the Rand Monetary Area was equivalent to a binding one-to-one peg with the Rand. In first pegging the Pula indirectly to the Rand rather than floating it, Botswana substituted a non-binding peg for an effectively binding peg. By then moving to a peg against a trade-weighted basket of currencies, Botswana maintained stability vis-à-vis its primary importer, tempered with movement towards a float. The choice of SDR as a counterweight to the Rand provides relative stability vis-a-vis the world market as well. In practice, Botswana exercises its ability to pursue independent monetary policy.

We follow the overview of exchange rate management from 1976 through the early 1990s provided by Hermans (1997 208 – 209).
fairly frequently (See Table 3). Management of the Pula mixed devaluations to increase export competitiveness with revaluations to counter inflationary pressures imported from South Africa (Hermans 1997 209). Despite the sometimes contradictory adjustments to its nominal exchange rate, Botswana maintained a stable real exchange rate with South Africa, especially through 1984 (see Figure 3). Since the Rand constitutes an important component of the basket of currencies, depreciations of the South African Rand against the US dollar represents a counterforce against the appreciation of the Pula against the US dollar (Granberg 1998). If anything, calculation of the real exchange rate indicates a real devaluation vis-a-vis the US dollar between 1984 and 1988 and against the US dollar and the SDR between 1996 and 2001.

Exchange rate volatility increased in the late 1990s. The government of Botswana stopped making the regular adjustments that had characterized exchange rate policy over the previous two decades (Interview 2005 66DP). Strong appreciation of the Pula against the Rand coincided with an equally dramatic depreciation against the US dollar and SDR, driven by the precipitous drop of the Rand against the dollar (see Figure 4). These exchange rate movements were propitious for Botswana, as the country simultaneously gained competitiveness in export markets and increased purchasing power in its main import market. The trend changed in late 2001, when the Pula began to appreciate steadily against the export market currencies. Evidence of currency over-valuation and unbalanced growth of non-tradeable sectors, especially construction and commerce, began to accumulate, suggesting that the country might yet become a victim of Dutch Disease (Love 1994; Molaodi 2004, 2005a).

Following the 7.5% depreciation in February 2004 (Gaolathe 2004), real exchange rates stabilized at about 110% against the 1996 base year for a period of 6 - 8
months. Then the Pula again began to appreciate against export market currencies despite maintaining stability against the Rand. In May 2005, the government responded by combining a steep – and unpopular – 12.5% depreciation with the introduction of a crawling peg intended to limit future misalignments (Gaolathe 2005). With these moves, the government attempted to eliminate existing over-valuation and decrease the probability of future over-valuation (Gaolathe 2005). Because the crawling peg adjusts automatically to shifts in the basket of currencies, exchange rate stability should increase in real terms without the need for dramatic readjustments. The shift to small automated adjustments should depoliticize exchange rate policy and undoubtedly made the crawling peg attractive for politicians. Figure 4 does not show the effects of the 12% depreciation in May 2005.

For most of the past thirty years, the government of Botswana avoided real appreciation of the Pula. Recent shifts both in policy and exchange rates serve as reminders that past success does not guarantee future performance, as investment bankers always warn. Nonetheless, the most recent interventions suggest a return to the long-term pattern of cautious exchange rate management.

Maintaining a stable real exchange rate should reduce the imbalance between booming and lagging sectors, but it does nothing to guard against the revenue fluctuations associated with cyclical commodity earnings. If a country builds up its foreign exchange reserves, its consumption need not fluctuate as severely as its mineral revenues. The Botswana government accumulated sizable foreign exchange reserves. Table 4 demonstrates that Botswana’s foreign exchange reserves have been sufficient to cover at least four months of imports since 1976, when the Pula’s introduction made foreign

27 Note that Figures 3 and 4 have different base years. In Figure 3, the Pula’s real exchange rate in 1996 was at a slightly depreciated level against both the Rand and the Dollar compared with the 1976 base year. This implies that the appreciation against the 1996 base year reported in Figure 4 would not be as great if compared with the 1976 base year.
28 E.g., Anon (2005a, 2005b); Motshwane (2005a, 2005b); Mokgoabone and Konopo (2005); Molaodi (2005b) and Phia (2005).
29 The comparison between a peg and a crawling peg is comparable to that between a managed investment account and an investment account (Interview 2005 66DP).
exchange accumulation possible. To minimize the risk of Dutch Disease, foreign reserves should be large enough to smooth expenditures in the event of a commodity price bust or resource depletion that causes current revenues to plummet. Botswana faced this test in 1981-82, when diamond prices dropped precipitously and the value of diamonds exports fell from P237 million in 1980 to P145 million (Hermans 1997, 215). Botswana again drew upon its reserves to compensate for a drop in diamond revenues in the wake of September 11, 2001. Although reserves declined during these periods, enough had been set aside that well over four months’ import cover could be maintained. By the mid-1980s, even as government expenditure on development projects increased, foreign reserves could cover imports for up to a year and a half. Import cover continued to increase through the mid-1990s. As Hill (1991) discusses in greater detail, accumulation of foreign reserves minimized expansion of the monetary base and thus alleviated some of the upward pressure on the exchange rate.

[Insert Table 4 here]

Based on our examination of real exchange rates since the early 1970s, a diagnosis of Dutch Disease in Botswana cannot be substantiated. The stability of real exchange rates in the 1970s followed by real devaluation in the 1980s completely contradicts the Dutch Disease prediction of real overvaluation. Although the Pula appreciated in real terms over the past several years, devaluations in 2004 and 2005, combined with the adoption of a crawling peg, indicate that the government has – admittedly after some delay – recognized the risks of allowing real currency appreciation. The country has not avoided all symptoms of Dutch Disease but has kept symptoms in check. Despite some warnings about recent trends (Molaodi 2004, 2005a), most agree with our assessment that Botswana has thus far avoided or limited symptoms of Dutch Disease (Auty 2001; Harvey 1992; Hill 1991; Samatar 1999).  

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30 But see Love (1994) for a more critical interpretation.
Botswana's success in limiting the effects of Dutch Disease over a period of three decades presents a puzzle. What conditions enabled Botswana's pursuit of beneficial economic policies? Signs of problems in the 1990s warn against easy explanations that depend on fixed characteristics. In the following sections we discuss domestic and international factors that shape policy preferences and options. First, we argue that overlapping sectoral memberships in the public sector and cattle industry, reinforced by state connections to mining, play an important role in determining expected policy preferences. Although we do not pursue the point here, we note the implications of changes in economic activities over the past three decades. To the extent that support for competitive exchange rates depended on a coalition involving a particular combination of overlapping sectors, economic diversification and changes in investment patterns may prompt reexamination of long-standing exchange rate policies. Second, we examine policy constraints resulting from Botswana's dependence on South Africa, both Botswana’s primary importer and the dominant member of the SACU. These internal and external factors, taken separately, are insufficient for an understanding of Botswana’s policy choices but together offer insight into the country's relative success in limiting the effects of Dutch Disease.

**Analysis of Policy Preferences and Constraints**

Most observers attribute Botswana’s relative success in managing its mineral earnings to the adoption of sound macroeconomic policies. Since Botswana has pursued a mostly conservative monetary policy and maintained significant foreign reserves during the period, its relative success can be attributed to sound policy choices. As we have noted repeatedly, these policies are available to all countries. The real question has to be why Botswana has adopted conservative policies for macroeconomic management during most of the independence era. Recently, Acemoglu et al. (2003) have credited Botswana’s institutions for promoting the adoption and survival of sound economic
policies. While institutions are clearly important, institutional explanations ultimately just shift the puzzle one step back. What accounts for the adoption and survival of good institutions? Given the attention garnered by Acemoglu et al.’s recent work on the importance of institutional legacies for economic development (e.g., 2001, 2003), we critically assess their account of Botswana’s success. Their interpretation downplays ambiguities in Botswana’s institutional legacy, overlooks the difficulty of building new national institutions on a foundation of pre-colonial institutions associated with multiple smaller political units, and emphasizes stability to the point that sources of political and economic change are obscured. We then turn to an analysis of sectoral interests of political coalitions in Botswana.

Although Acemoglu et al. (2003) do not focus on either the Dutch Disease or the resource curse, they acknowledge that Botswana’s economic performance is all the more astonishing in light of the poor performance of so many other exporters of highly valuable natural resources. They offer a complicated explanation for Botswana’s economic performance that essentially boils down to the importance of good institutions. They accept the conventional wisdom that Botswana has enjoyed economic prosperity as a consequence of good policies. Acemoglu et al. (2003) portray those policies as products of “institutions of private property” and offer a historically contingent explanation for the presence of institutions of private property in Botswana. Limited colonial interest in Botswana allowed the survival of pre-colonial institutions that involved broad-based checks on political authority and gave the political elite an interest in protecting private property. These institutions were somehow incorporated into post-colonial institutions and, in combination with key decisions by Botswana’s first two presidents (Seretse Khama and Quett Masire), provided the basis for sound macro-economic management following independence. Acemoglu et al. also make the incredible, unexplained, and

31 Auyt (2001 80) notes that Botswana’s diamond revenues have been substantially less volatile than those of other mineral dependent countries. Since the management problem has thus far been less severe, Botswana’s relative success cannot be attributed wholly to its political institutions.
unsubstantiated claim that “[t]he revenues from diamonds generated enough rents for the main political actors, increasing the opportunity cost of, and discouraging, further rent seeking” (2003, 113). Although this expectation runs directly counter to the usual expectation that mineral rents encourage rent-seeking, no justification is provided.

Except for the statement about the effects of mineral rents, this account of Botswana’s success sounds plausible on first glance, but it does not withstand careful assessment. Acemoglu et al. (2003) exaggerate the extent to which pre-colonial institutions in Botswana were unique in providing checks on political authority. Acemoglu et al. emphasize the importance of assimilation in the pre-colonial period. Yet pre-colonial politics were also marked by frequent fissures and shifting alliances (Comaroff and Roberts 1981; Schapera 2004 [1938]; Tlou 1985). Acemoglu et al. overstate how effective pre-colonial checks on political authority were and understate the influence colonial rule had on traditional systems of authority (Mgadla and Campbell 1989; Morton 1996; Poteete 2002; Tlou 1985; Wylie 1990). Fissure and exit provided the most obvious checks on pre-colonial political authority (cf., Herbst 2000). Colonial interventions altered the balance of power within these polities by fixing tribal boundaries and interfering in the selection and retention of chiefs. Colonial influence varied across the territory, reinforcing the power of some chiefs and undermining the authority of others.

Even if one accepted their rosy-eyed interpretation of pre-colonial institutions, Acemoglu et al. (2003) do not explain the mechanisms by which pre-colonial institutions were incorporated into post-colonial institutional arrangements. Botswana brought together several distinct pre-colonial polities in which cooperation coexisted with rivalries. Botswana’s leaders built and sustained a multi-party political system over nearly forty years, but this outcome was in no way foreordained. Acemoglu et al. do

emphasize the leadership exercised by Seretse Khama, and particularly his efforts to replace pre-colonial institutions with state institutions (99 – 100). This seems to contradict their argument about the value of retaining pre-colonial institutions. Although Botswana certainly did build upon patterns of political organization that predate independence, national institutions were new and malleable when diamond revenues began to pour into government coffers some six years after independence.

An explanation based on state-building does not offer a credible explanation for Botswana’s economic performance, especially when the scope for divergent interpretations of tradition is taken into consideration (Comaroff and Robert 1981; Hobsbawm and Ranger 1983). An institutional explanation for policy choices and economic performance requires a political anchor. The sectoral bases of the dominant political coalition provides that anchor and - because the structure of the economy and the representation of interests in political coalitions can change over time – still allows for change over time.

**Overlapping Sectors and Policy Preferences**

In Botswana, all mining ventures operate as partnerships between the state and various foreign investors. De Beers, a South African firm, is the government’s partner in all diamond mining efforts through the Debswana partnership. Contributions to Botswana’s economy from mining are channeled through the state, through direct employment in the mining sector, and through any further investment in Botswana by the multinational corporations. De Beers in fact invests in both infrastructure and personnel training (Hartland-Thunberg 1978). As demonstrated in Table 5, however, the mining sector has never provided more than 9% of formal sector employment, and accounted for less than 3% in 2001. Direct benefits from diamond mining are concentrated in the hands of a few actors, primarily De Beers itself, Debswana, and the government.

[Insert Table 5 here]
The government controls access to the economic rents extracted from mining and thus attracts demands for increased expenditures (e.g., Odirile 2005). Demands have been met to some extent: “there is … a very large allocation of total capital … to the expansion of investment in sectors that will not be cost-covering: roads, schools, health services, etc.” (Lewis 1981 26) - that is, to investment in infrastructure and human capital. The government adopted the principle that no mining revenues were to be spent on consumption; they were to be invested in above-the-ground capital, defined broadly to include education and health (Field notes, 26 May 2005). These forms of economic rent allocation primarily benefit the public sector, most directly, as well as the service sector in general. Focusing investment, channeled through the state, on infrastructure and human capital has a number of consequences for Botswana’s employment structure. The state expands its own employment, both in terms of project managers and in such areas as education and health care. It also supports job creation in non-tradable sectors such as construction (e.g., roads) and services (e.g., finance).

Expansion of non-tradable sectors in the 1980s set the stage for upward political pressure on the exchange rate that, because mining revenues disguise real balance of payments deficits, could lead to overvaluation and a non-competitive tradable sector. In Botswana, however, real currency appreciation has been limited, whether viewed in terms of magnitude, duration, or the number of markets affected. Heavy investment by civil servants, particularly at the elite level, in the cattle industry, has provided a well-organized interest group wary of overvaluation and in a position to affect policy decisions. The growth of urban commercial, real estate, and other services in the 1990s threatens the anti-appreciation consensus. It is too early to know whether or how these economic changes will affect the continuation of anti-appreciation policies.

Livestock has been both the traditionally favored form of investment for Batswana and an important export industry. When cattle owners, farming companies, and their employees are all counted, the cattle industry affects over 100,000 households (CSO
or 24% of the population. The identity of these households, however, is more pertinent to the current concern than are the aggregate statistics. At the time of independence, members of Botswana’s dominant class were largely from chiefly families who were among the largest traditional cattle owners (Parson 1981). Following independence, a “large majority of politicians and senior government officials in Botswana own cattle, and an ever higher proportion are related to people who own cattle” (Harvey 1992). At least through the 1980s, civil servants could and often did retire at 45 to manage their cattle (Harvey and Lewis 1990). A number of past and current political figures are well known for their farming interests. Quett Masire, President of Botswana from 1980 until 1998, for example, liked to describe himself as a farmer on loan to politics (Interview 2005; Interview 72PO).

Although many take the equation of political elites with large-scale livestock owners as a matter of course, there is little systematic data on livestock ownership by politicians and civil servants. Samatar’s (1999) data on livestock ownership by members of the first three parliaments (1966 – 1978) is an important exception. As summarized in Table 6, he found that at least two-thirds of members of the National Assembly during this period were medium- to large-scale livestock farmers. Livestock interests were even more pronounced among MPs from the ruling Botswana Democratic Party (BDP), at least 57% of whom owned large herds.

[Insert Table 6 here]

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34 This figure was calculated by taking the number of traditional cattle holders from CSO (2003b) and adding the number of people of people employed in agriculture (CSO 2003a), excluding those listed as self-employed or as working at their own cattleposts. Recognizing that this method may still involve some overlap, we round down from the result of 100,753. On the other hand, the agricultural statistics do not include commercial ranches and some of the self-employed individuals in the agricultural sector may be farm owners, this figure may be a slight underestimate. It is not clear whether BMC employees are categorized as agricultural workers.

35 The average household in Botswana had 4.1 members in 2001 (CSO 2002). The number of households involved in livestock was multiplied by 4.1 and then divided by 1.7 million, the size of the national population in 2001 (CSO 2002).

36 See also Charlton (1991), Morrison (1987), and Picard (1980, 1987).

37 Livestock ownership appears to be common among local-level politicians as well. Although a 1995 – 1996 survey by the first author of 48 district councilors and Land Board in five districts did not systematically ask about livestock ownership, all 15 respondents who addressed the issue did own livestock.
In essence, the distinction between the public sector and the cattle export sector was illusory and deceptive in Botswana, at least for the first decade or so following independence. Alignment of a non-tradable sector with a tradable sector - that is, the public sector with the cattle industry - contradicts the assumptions of distinct and antagonistic sectors that drive most treatments of Dutch disease. Policy preferences of potential interest groups cannot be defined based on sectoral identity, for the meaning of sectoral identity is no longer clear. Given the overlap in civil servants, politicians, and cattle owners, politically pertinent cleavages are unlikely to form along sectoral lines. Rather than standing opposed, the political and economic elite consist largely of the same people and so form a single interest group. The overlap in large-scale livestock interests and influential political circles has ramifications for predictions of policy preferences.

According to sectoral political theories, both interest groups and their actual policy preferences are defined by sectoral identity. All members of a sector prefer policies that benefit their sector as a whole. As discussed above, Frieden (1994) predicts preferences over monetary and tariff policies under conditions of high capital mobility based on sectoral identity. Figure 5 inserts sectors appropriate to Botswana into his schema. From the perspective of sectoral politics, one would expect the public and service sectors to pursue policies entirely opposed to those preferred by the cattle industry - a highly flexible, but somewhat appreciated exchange rate as opposed to a stable but somewhat depreciated exchange rate. Figure 5 distinguishes between the interests of De Beers and Debswana. As an international investor, De Beers can be expected to be primarily interested in exchange rate stability. Debswana, Botswana’s 50-50 joint venture mining company, is expected to favor relative depreciation because it increases the Pula value of diamond revenues.

[Insert Figure 5 here]

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38 This approach contrasts with theories of politics that assume political contestation focuses on division of the proceeds along factor (e.g., Rogowski 1989) or class lines.
As long as the public sector overlapped significantly with the cattle industry, actual policy preferences of key policy-makers probably reflected trade-offs among sectorally defined interests. Because they did not face a choice simply between a fixed versus a floating exchange rate, policy-makers could strike a balance between their own partially opposed interests. In other words, political actors make decisions within a continuous policy space, as depicted in Figure 6. The next step is to move from several sectorally defined ideal points, such as appear in Figure 6, to a single ideal point representing the political and economic elite of civil servants who also own cattle. This is likely to be at the point of tangency between the hypothetical indifference curves (depicted here as Euclidean preferences) of the public sector and the cattle industry. Thus, the elite's ideal point would be in the win set of the public sector and the cattle industry.\(^{39}\) As long as livestock remained the preferred form of investment for the political case, policies beneficial to cattle would be favored.

[Insert Figure 6 here]

The main point is less that the precise policy preferences of this elite group can be determined, than that an interest group overlapping at least two sectors existed in Botswana and probably had policy preferences somewhere between those of the two sectors when considered separately. Moreover, this particular interest group was well positioned for influencing policy making. As Morrison (1987) comments, one could not logically expect that a state elite whose private interests are so deeply tied to the cattle industry would use state authority to siphon surpluses from itself. (168)

This overlap and the general importance of cattle to Botswana's political economy provides an explanation for avoidance of Dutch Disease. Allowing overvaluation would harm cattle exports. Since maintaining the competitiveness of cattle is in both the short- and long-term interests of the civil servants who compose the state, one would expect

\(^{39}\) Given their importance for the government budget and thus the ability of government politicians to deliver projects to constituents, mining interests are expected to influence elite preferences as well. The government’s interest in Debswana’s Pula earnings should coincide with the interests of livestock owners.
policy preferences and choices to be favorable, or at least neutral, towards tradable sectors. Based on the approximations in Figure 6, the policy preferences expected to dominate the policy making process include moderate flexibility in exchange rate policy with no or little real appreciation or depreciation in exchange rate level.

Any explanation of macroeconomic policies in Botswana needs to be able to account not only for Botswana long period of success, but also for its more ambiguous performance in recent years. Botswana’s success in maintaining a relatively balanced exchange rate for more than two decades has resulted in some degree of economic diversification. This is no longer the country of farmers that it was upon independence. Employment opportunities exist in banking, commerce, construction, education, health care, tourism, the professions, and some forms of manufacturing. Others invest in real estate. We expect that, as the economic activities and investment patterns of policy-makers change, so should their policy preferences.

As other economic opportunities have emerged, livestock has become relatively less attractive. The Botswana Meat Commission (BMC), the monopsony purchaser of livestock for export, has long offered prices that farmers find unattractive (McGowan International and Cooper and Lybrand 1987; BOPA 2005b). Low throughput raises the operating costs of the BMC and raises questions about its survival (Mogapi 2001; BOPA 2005b, 2005c). In addition, low BMC prices help keep prices in the growing domestic market low as well (BOPA 2005c; cf., Mogapi 2001). Droughts and diseases have further contributed to the reduction of the cattle industry. Not surprisingly, investment in livestock has declined considerably. The number of livestock in the country decreased from 3 million in the early 1980s to approximately 1.7 million now (BOPA 2005a).

Considering its general decline, it would be surprising if the political elite remained heavily involved in the livestock industry. Unfortunately, we are unaware of any recent systematic data on the economic activities of politicians and civil servants along the lines of Samatar (1999). There is a general sense – and plenty of anecdotal
evidence - that, while politicians and civil servants still own livestock, they are increasingly active in other sectors of the economy (Interview 2005 76PO). Whereas livestock was a serious investment for many members of the political elite in the past, it is now more of a hobby (Interview 2005 66DP; Field notes 26 May 2005). People still keep cattle for social purposes, such as bridewealth payments or to feed guests at weddings and funerals. Some politicians have reportedly purchased cattle for political reasons, as a way of identifying with rural constituents (Field notes 26 May 2005). But civil servants are at least as likely to retire into politics or businesses as to their cattleposts (Charlton 1991; Holm and Somoleke 1988 266; Poteete 2003; Interview 2004 11RA; Field notes 28 May 2005). Real estate and construction now outrank livestock as preferred investments for many, including politicians and civil servants (Parsons 1993; Wiseman 1998; Interview 2004 09RA; Interview 2005 20NG; Field notes 26 May 2005).

The effect of these trends on exchange rate policies remained to be seen. The prominence of non-tradable activities such as real estate and consultancies, as well as the expansion of commercial enterprises dependent on imports, raises the specter of increasing political pressure for an appreciated currency. On the other hand, substantial growth in tourism, nascent manufacturing and game ranching for export markets, and continued reliance on livestock by rural smallholders provide bases of support for continuation of anti-appreciation policies. The political elite are involved in all of these activities. High-ranking current and retired officials have investments in construction firms and property, but also in tourism and game ranching. The increasing variety of economic opportunities means that, although Botswana’s political elite still maintain

40 As recorded in Field notes, 26 May 2005: “He said that although, yes, politicians still all own livestock, he did not know that it was as [an] investment. It used to be that at 4 pm on Fridays, everybody would head out of town to check on their cattleposts. Now they go out to check on their property holdings and collect rent.”

41 Factional divisions in the BDP have been attributed (by the media) in part to the growing number of civil servants who have gained Cabinet seats or other political politicians immediately after “retirement.” Of course, some do still retire into politics (Interview 2004 03LA; Interview 2004 12LB; Field notes 17 June 2005).
interests outside the public sector, the commonality of economic interests that characterized the country’s early years cannot be expected to continue. Increasing economic heterogeneity introduces new possibilities for differences over policy. How these are settled remains to be seen. It is, in fact, quite likely that the balance of power will shift between anti- and pro-appreciation interests, as seems to have happened over the past five years or so.

**External Dependence as Policy Constraint**

Botswana's policy options are constrained by external factors resulting from small market size and geopolitical circumstance. Botswana's small internal market dictates openness to global markets for the economies of scale needed for industrialization (Katzenstein 1985). Historical circumstance and regional proximity have resulted in heavy dependence upon South Africa. During its period as a British protectorate, modern day Botswana was expected to eventually be absorbed into South Africa. Even after establishment as an independent state, Botswana's economic integration with South Africa remained quite high. The extent of economic integration is manifested in the ten years delay between independence and introduction of the Pula, the high proportion of imports originating in South Africa, and the continuing (if declining) importance of remittances from migrant workers at South African mines. Botswana's need for economic openness and its high integration with the South African economy act as constraints on policy options. Economic openness generally reinforces policy preferences for stable real exchange rates, but dependence on the South African economy limits policy choices.

Botswana's pre-independence economic integration with South Africa was reinforced after independence by membership in the SACU, as discussed above. As proceeds from tariff collection make a substantial, if declining, contribution to the government's recurrent revenues and exiting the SACU would contribute nothing concrete to government coffers, it is improbable that Botswana will chose to leave the common market. Consequently, the option of manipulating tariff policy is limited.
Botswana can further raise tariffs, either temporarily against the rest of the SACU or between the common market and the global economy. Until the recently completed renegotiation of the SACU agreement, South Africa set SACU’s common tariffs to protect its own industries (Kirk and Stern 2005). Lower tariffs were not an option for Botswana or other SACU members. The terms of the new agreement took existing tariffs as the status quo and any change requires consensus among all member countries (Kirk and Stern 2005). The terms of the Uruguay round of GATT require a gradual decline in SACU tariffs but, as long as South Africa or any other member benefits from higher tariffs, additional reductions are not likely.

Lowering tariffs is generally seen as an alternative to lowering exchange rates, since both policies result in lower domestic costs. By remaining in the SACU, Botswana loses the tariff policy option and, especially prior to the Uruguay round, reinforced its integration with the South African economy. Even with the gradual reduction in common tariffs, integration with South Africa is expected to remain quite high. As a consequence, real price stability between South Africa and Botswana is highly valued, at least from Botswana's point of view. Membership in the SACU encourages a policy preference for stable terms of trade, at least vis-a-vis South Africa, while limiting the option of lowering tariffs.

Although Botswana receives most of its imports from the SACU, most of its exports are to other markets. \(^{42}\) Beef, for example, is exported primarily to the EU. The weight of export earnings in GDP prevents inattention to rates of exchange with the rest of the world. Again, since policy makers have also been cattle owners, they could be expected to seek a balance between real price stability in imported inputs and exports, and to be in a position to enact the policies necessary to attain it. The variety of changes

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\(^{42}\) Between 1997 and 2001, an average of 75% of Botswana’s imports originated within the SACU region (CSO nd). Over the same five year period, an average of 67% of Botswana’s exports went to the UK and an additional 17% to other European countries (CSO nd).
in Botswana’s internal and external economic environment means that the elite no longer share a common or clear-cut position on exchange rate policies.

In summary, external factors constrain policy options available to Botswana. Membership in the SACU places a lower limit on tariffs while, in combination with Botswana’s general dependence on trade, also reinforcing the preference for a stable real exchange rate. The overwhelming dependence on South African imports lays greater emphasis on stability vis-a-vis the Rand, as compared to other currencies.

**Conclusions**

Botswana, unlike other countries experiencing explosions of revenue from natural resource exploitation, managed to limit the effects of Dutch Disease - the rapid expenditures and real overvaluation of currency that cripples the development of other tradable sectors. Both domestic and international factors contributed to the policy choices that fostered Botswana’s relative success. Overlaps in public sector employment and cattle ownership generated policy preferences that avoided the divisions over exchange rate policies predicted by theories of sectoral politics and acted as a brake on pressures for the rising expenditures that would otherwise lead to heightened domestic costs.

Dependence on South Africa, reinforced by membership in the SACU, constrains policy choices. Membership in the SACU blocked (and now limits) the option of lowering tariffs, for example. Dependence on South African imports encourages maintenance of a stable rate of exchange vis-a-vis the Rand.

The model predicts policy choices that match well with those actually pursued in the 1970s and 1980s. As mining and exports to other markets became more important, Botswana moved from membership in the Rand Monetary Area, to a peg with a single currency (the US dollar), and then to a peg with a basket of currencies (Rand-SDR). This indicates movement toward greater exchange rate flexibility - the supposed policy preference of the state - and growing recognition of the need to balance exchange rate stability with the Rand with stability with the rest of the world, thus factoring in exporter
interests. The Rand's real devaluation, especially since the 1980s, forced Botswana to face this choice directly. A balance was struck, but one which leans heavily towards maintaining stability with the Rand. Since this choice resulted in a real devaluation vis-a-vis the rest of the world, the policy completely contradicts Dutch Disease expectations and benefits exporting sectors. These results are consistent with our expectation that cattle exporting interests influenced policy-making through elite level civil service cattle owners.

By moving away from economically theories of sectoral politics that implicitly make deterministic predictions of Dutch Disease and by considering external constraints, Botswana's avoidance of Dutch Disease ceases to be surprising. The political coalitions and geopolitical conditions that drive Botswana's political economy guided the country away from policies biased against the tradables sector. Our allowance for complex patterns of investment across sectoral lines and our emphasis on coalitions points to potential sources of change. Overlapping sectors helped Botswana limit the effects of Dutch Disease for twenty years or more. Future macro-economic policies in Botswana depend on whether investment patterns continue to create sectoral overlaps or increasingly reinforce sector-based interests, and on the relative representation of increasingly diverse economic interests in positions of political power.
Works Cited


**Interview data**

*All interviews were conducted by the first author.*

2004 03LA. Official in the Ministry of Lands and Housing on 16 June 2004 in Gaborone.

2004 09RA. Retired official with the Ministry of Agriculture, now involved with real estate, on 22 June 2004 in Gaborone.
2004 12LB. Land Board staff on 22 June 2004 in Gaborone.

2004 11RA. Retired official with the Ministry of Agriculture, now a private consultant, on 22 June 2004 in Gaborone.

2005 20NG. Representative of an NGO and former government employee on 2 June 2005 in Maun.


2005 71PO. Opposition MP on 5 July 2005 in Gaborone.


2005 76PO. Opposition MP on 7 July 2005 in Gaborone.

**Field Notes, 2004 - 2005**


28 May 2005. Informal conversation with Tawana Land Board staff member in Maun, Botswana.

17 June 2005. Informal conversation with Ngwato Land Board staff member in Serowe, Botswana.
Table 1: Average Rate of Growth of GDP Per Capita, Two Fastest Growing Economies Per Region, 1960-2003

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>AGR† GDP/Capita 1960-2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia &amp; Pacific</td>
<td>China*</td>
<td>5.99</td>
</tr>
<tr>
<td></td>
<td>Korea, Rep.*</td>
<td>5.81</td>
</tr>
<tr>
<td>Europe</td>
<td>Malta**</td>
<td>5.36</td>
</tr>
<tr>
<td></td>
<td>Ireland*</td>
<td>4.15</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>Hungary*</td>
<td>3.32</td>
</tr>
<tr>
<td></td>
<td>Latvia***</td>
<td>2.71</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>Belize**</td>
<td>3.30</td>
</tr>
<tr>
<td></td>
<td>Chile*</td>
<td>2.56</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>Oman**</td>
<td>6.28</td>
</tr>
<tr>
<td></td>
<td>Tunisia**</td>
<td>3.12</td>
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<tr>
<td>South Asia</td>
<td>Pakistan*</td>
<td>2.58</td>
</tr>
<tr>
<td></td>
<td>India*</td>
<td>2.56</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>Botswana*</td>
<td>6.31</td>
</tr>
<tr>
<td></td>
<td>Nigeria*</td>
<td>0.75</td>
</tr>
</tbody>
</table>

* 43 observations
** 42 observations
*** 38 observations
† Average growth rate


Figure 1: Exchange Rate Policy Preferences for General Sector Types
## Preferred Level of the Exchange Rate

<table>
<thead>
<tr>
<th>Preferred Degree of Exchange Rate Flexibility/ National Monetary Independence</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>International traders and investors</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Export-competing producers of traded goods</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Producers of non-traded goods and services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Import-competing producers of traded goods</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: “High” refers to a more appreciated exchange rate or a floating exchange rate (depending on the axis under consideration), while “low” refers to a more depreciated exchange rate or a fixed exchange rate.

**Source:** Adapted from Frieden (1994, 85).
Figure 2: Contribution of Selected Sectors to Botswana’s GDP, 1968 - 2000

Sources: The table is taken from Leith (2002) and is based on

Table 2: Customs Revenues from SACU as a Percentage of Revenues for the Government of Botswana

<table>
<thead>
<tr>
<th>Year(s)</th>
<th>Percent of Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969-70</td>
<td>30</td>
</tr>
<tr>
<td>1979-80</td>
<td>37</td>
</tr>
<tr>
<td>1988</td>
<td>11.5</td>
</tr>
<tr>
<td>1992</td>
<td>21.6</td>
</tr>
<tr>
<td>2001-02</td>
<td>12.8</td>
</tr>
</tbody>
</table>


Table 3: Nominal Adjustments to the Pula Exchange Rate Peg Against a Basket of Currencies, 1980 - 2005

<table>
<thead>
<tr>
<th>Year(s)</th>
<th>Direction of Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1977</td>
<td>Appreciation</td>
<td>5</td>
</tr>
<tr>
<td>Sept. 1979</td>
<td>Appreciation</td>
<td>5</td>
</tr>
<tr>
<td>Nov. 1980</td>
<td>Appreciation</td>
<td>5.3</td>
</tr>
<tr>
<td>May 1982</td>
<td>Depreciation</td>
<td>10</td>
</tr>
<tr>
<td>July 1984</td>
<td>Depreciation</td>
<td>15</td>
</tr>
<tr>
<td>Jan. 1985</td>
<td>Depreciation</td>
<td>15</td>
</tr>
<tr>
<td>June 1989</td>
<td>Appreciation</td>
<td>5</td>
</tr>
<tr>
<td>Aug. 1990</td>
<td>Depreciation</td>
<td>5</td>
</tr>
<tr>
<td>Aug. 1991</td>
<td>Depreciation</td>
<td>5</td>
</tr>
<tr>
<td>Feb. 2004</td>
<td>Depreciation</td>
<td>7.5</td>
</tr>
<tr>
<td>May 2005</td>
<td>Depreciation</td>
<td>12.5</td>
</tr>
</tbody>
</table>


Figure 3: Real Exchange Rates, 1976 – 2000, January 1976 = 1
Real Exchange Rate Indexes
January 1976 = 1

Source: Leith (2002).
Figure 4: Real Exchange Rates, December 2000 – April 2005, November 1996 = 1

Source: Bank of Botswana (2005a)
Rand/Pula calculated using South African Core Inflation.
Table 4: Foreign Exchange Reserves

<table>
<thead>
<tr>
<th>As at end of</th>
<th>Foreign Exchange Reserves (million)</th>
<th>Imports (cif)</th>
<th>Import Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pula</td>
<td>US Dollar</td>
<td>SDR</td>
</tr>
<tr>
<td>1976</td>
<td>65</td>
<td>75</td>
<td>64</td>
</tr>
<tr>
<td>1977</td>
<td>83</td>
<td>100</td>
<td>83</td>
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<tr>
<td>1978</td>
<td>125</td>
<td>151</td>
<td>116</td>
</tr>
<tr>
<td>1979</td>
<td>211</td>
<td>267</td>
<td>203</td>
</tr>
<tr>
<td>1980</td>
<td>255</td>
<td>344</td>
<td>270</td>
</tr>
<tr>
<td>1981</td>
<td>223</td>
<td>253</td>
<td>218</td>
</tr>
<tr>
<td>1982</td>
<td>311</td>
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<td>1983</td>
<td>457</td>
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<td>482</td>
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<td>1645</td>
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<td>715</td>
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<tr>
<td>1986</td>
<td>2201</td>
<td>1198</td>
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<td>3152</td>
<td>2013</td>
<td>1421</td>
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<tr>
<td>1988</td>
<td>4368</td>
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<td>1684</td>
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<tr>
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<td>2127</td>
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<tr>
<td>1990</td>
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<td>1991</td>
<td>7707</td>
<td>3719</td>
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</tr>
<tr>
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<td>8561</td>
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<td>2757</td>
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<td>1993</td>
<td>10509</td>
<td>4097</td>
<td>2983</td>
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<tr>
<td>1994</td>
<td>11961</td>
<td>4402</td>
<td>3018</td>
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<tr>
<td>1995</td>
<td>13249</td>
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<tr>
<td>1996</td>
<td>19076</td>
<td>5234</td>
<td>3644</td>
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<td>1997</td>
<td>21619</td>
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<td>1999</td>
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<td>6229</td>
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<tr>
<td>2000</td>
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<td>6317</td>
<td>4848</td>
</tr>
<tr>
<td>2001</td>
<td>41182</td>
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<td>4707</td>
</tr>
<tr>
<td>2002</td>
<td>29926</td>
<td>5474</td>
<td>4058</td>
</tr>
<tr>
<td>2003</td>
<td>23717</td>
<td>5339</td>
<td>3643</td>
</tr>
<tr>
<td>2004</td>
<td>24200</td>
<td>5660</td>
<td>3700</td>
</tr>
</tbody>
</table>

Table 5: Mining and Quarrying’s Share of Paid Employment in Botswana, 1972 – 2001

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent of All Paid Employment in Mining/Quarrying</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>9</td>
</tr>
<tr>
<td>1976</td>
<td>9</td>
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<tr>
<td>1980</td>
<td>9</td>
</tr>
<tr>
<td>1981</td>
<td>7.5</td>
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<tr>
<td>1982</td>
<td>7.1</td>
</tr>
<tr>
<td>1983</td>
<td>7.2</td>
</tr>
<tr>
<td>1984</td>
<td>6.7</td>
</tr>
<tr>
<td>1985</td>
<td>6.3</td>
</tr>
<tr>
<td>1986</td>
<td>5.9</td>
</tr>
<tr>
<td>1987</td>
<td>4.9</td>
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<td>1993</td>
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<td>1994</td>
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<tr>
<td>1995</td>
<td>3.6</td>
</tr>
<tr>
<td>1996</td>
<td>3.6</td>
</tr>
<tr>
<td>1997</td>
<td>3.6</td>
</tr>
<tr>
<td>1998</td>
<td>3.6</td>
</tr>
<tr>
<td>1999</td>
<td>3.3</td>
</tr>
<tr>
<td>2000</td>
<td>3.0</td>
</tr>
<tr>
<td>2001</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Table 6: Livestock Ownership during First Three National Assemblies (1966 – 1978): All Members of Parliament (MPs) and Botswana Democratic Party MPs

<table>
<thead>
<tr>
<th>Affiliation (Row %)</th>
<th>Herd Size</th>
<th>Livestock Ownership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
<td>Medium</td>
<td>Small</td>
</tr>
<tr>
<td>MPs</td>
<td>21 (50%)</td>
<td>6 (14%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>BDP MPs only</td>
<td>20 (57%)</td>
<td>6 (17%)</td>
<td>1 (3%)</td>
</tr>
</tbody>
</table>

Source: Samatar (1999, 70). Herds of fewer than 40 head of cattle are considered small. The distinction between medium and large herds is more subjective.
**Figure 5:** Exchange Rate Policy Preferences: General Sector Types and Botswana Equivalents

<table>
<thead>
<tr>
<th>Preferred Level of the Exchange Rate</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferred Degree of Exchange Rate Flexibility/ National Monetary Independence</td>
<td>International traders and investors</td>
<td>Export-competing producers</td>
</tr>
<tr>
<td></td>
<td>DeBeers</td>
<td>Debswana</td>
</tr>
<tr>
<td></td>
<td>International traders</td>
<td>Livestock exporters</td>
</tr>
<tr>
<td></td>
<td>Non-traded goods and services</td>
<td>Export manufacturing</td>
</tr>
<tr>
<td></td>
<td>Public and service sectors</td>
<td>Import-competing producers</td>
</tr>
<tr>
<td></td>
<td>Domestic commerce</td>
<td>Manufacturing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Livestock for domestic market</td>
</tr>
</tbody>
</table>

Note: “High” refers to a more appreciated exchange rate or a floating exchange rate (depending on the axis under consideration), while “low” refers to a more depreciated exchange rate or a fixed exchange rate.

**Source:** Adapted from Frieden (1994, 85).
Figure 6: Spatial Model of Exchange Rate Policy

Note: Level of bilateral real exchange rate refers here to preferences for appreciation/depreciation vis-à-vis the basket of currencies.