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**Stock Market Finance and Gross National Happiness: An Institutional Fit? Evidence from Bhutan**

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**Abstract**

*This paper studies the institutional fit and the appropriateness of neoclassical stock market institutions within the context of Buddhist informal institutions in the Himalayan Kingdom of Bhutan. This is particularly timely given the considerable media interest in the principles of Gross National Happiness (GNH) as an alternative series of measures relating to economic growth and development. Our findings reveal that while conventional development policy supporting stock market and banking system financial systems is not counter to the principles embodied in GNH the central government may be better in administering finance owing to a general apathy towards formal neoclassical institutions by the population owing to the dominance and pervasive strength of the Buddhist monastic traditions and culture in Bhutan*

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## Introduction

There is considerable interest amongst policy-makers in smaller developing economies in adopting institutions that will facilitate economic development and increase prosperity. A centrepiece of modern development policy is the role of a markets-based system and specifically the establishment of stock exchanges that facilitate the raising of much needed development capital for domestic industrial growth and provide investors and capital issuers with risk diversification opportunities. Development policy centring on the establishment of stock markets focuses on their purported benefits as defined by neoclassical economics. However this commonly does not take into account the institutional matrix of the indigenous society and how compatible their institutions and social values are with those of stock markets. This possibility defines the likely level of successful adoption of a markets-based financial system.

The establishment of a securities exchange in Bhutan is particularly interesting as a focus of study given the unique cultural and institutional structure of Bhutanese society which is largely expressed through the principles embodied in the concept of Gross National Happiness (GNH). While this concept was first introduced in 1972 by Jigme Singye Wangchuck, it has received considerable worldwide media attention (Braun et al (2009); Sinha (2004); the Centre for Bhutan Studies (2009a)) as an alternative measure of national performance to the Gross Domestic Product (GDP) measure traditionally associated with economic performance. Furthermore Bhutan has embraced the four major principles behind GNH, namely equitable economic development, environmental preservation, cultural resilience and good governance, at the core of national development policy (Centre for Bhutan Studies, 2009b). The broader and more holistic concept of GNH has underscored development policy in Bhutan while leading to a wider debate in the development community regarding the beneficial impact of these principles in the effective measurement of institutional development worldwide (Braun et al (2009); Centre for Bhutan Studies (2009a, 2009b)).

Bhutan is largely distinct in practicing the Mahayana strain of Buddhism which is more closely associated with ancient Tibetan Buddhism in contrast to the more modern Therevada version that is dominant in Thailand and Sri Lanka (Lewis (1996); Dorji (2008); Keown (2005); Rose (1977)). As such the informal institutions which govern the society in defining behavioural norms and values (North (1990); Williamson (1996)) have an especially strong focus on moral discipline, cultivation of virtue and altruistic conduct as well as a doctrine of non-violence towards all sentinel beings including humans and animals reinforced by a powerful role accorded to monastic life within society (Braun et al (2009); Dorji (2008); Keown (2005); French (2002)). Furthermore the distinctive institutional environment of Bhutan has largely shaped by a reluctant need to reform and modernise political and economic apparatus with the transplanting of modern, albeit largely Indian common law, institutions (Joireman (2006); Sinha (2004); Rose (1977); Nishimizu (2008)) while preserving the integrity of indigenous Buddhist culture (McDonald (2005); Sinha (2004); Nishimizu (2008)). As a consequence the business environment is largely dominated by conglomerates with significant levels of government ownership and control, where government itself is defined as an extension of the monastic institutions, as well as numerous smaller family firms (Sarkar and Ray (2007); Sinha (2004); Leo (1977)). As a consequence this study is focussed to addressing the research question as to whether the neoclassical development policy promoting stock market development is appropriate within a societal matrix defined formally by GNH and the informal institutions of Buddhism and the monastic political economy.

This paper proceeds as follows. Section 2 reviews the literature relating to economic growth and finance and the smaller research area of Buddhist institutional economics. Section 3 provides a discussion on South Asian regional markets which leads to Section 4 focussing on the evolution, structure and characteristics of the Bhutanese capital markets. A discussion of the constraints to stock market development is undertaken in Section 5 with Section 6 concluding.

## Literature Review

Much of the development policy literature relating to the impact of financial intermediaries in the economic development of developing countries is centred on neoclassical economics. However while this does explicitly account for transactions costs it does retain core assumptions of the invisible hand in terms of the coordinative efficiency of the market mechanism first envisaged by Adam Smith that facilitates specialization of economic activity, technological and capital accumulation and economic growth (see Adam Smith (1776) and the Wealth of Nations). Schumpeter (1912) embodies these concepts in outlining his vision of development based on well developed financial intermediaries in facilitating entrepreneurial activity in developing countries. Consequently well developed financial intermediaries were deemed to foster technological innovation through their ability to mobilize savings, monitor firm managers, evaluate projects, manage and pool risks and facilitate trade transactions. Development through the promotion of an entrepreneurial class in developing societies was deemed to enable economic growth through technological, human and social capital accumulation which would be felt across wider society by its diffusion due to industrial growth and mass employment. Early criticism of development policy centred on these concepts came from Rimmer (1961) through the observation that technological diffusion in developing countries is largely government facilitated and consumption-orientated as opposed to genuine creation of human and social capital engendered by novel innovative activity. The now burgeoning finance-economic growth literature has focussed on the role ascribed to financial intermediaries by Schumpeter which has led to a wider debate with polarised opinions. Meier and Seers (1984) deemed finance as an irrelevance while Joan Robinson (1952) cited finance as following enterprise development. However a more liberal approach is adopted by Gurley and Shaw (1955), Goldsmith (1969) and McKinnon (1973) in ascribing a role for finance in growth while being largely inconclusive regarding the nature of the financial institutions themselves. Consequently proponents of bank-based financial intermediation cite the benefits of the longer-term relationship focus as opposed to short-term profit incentives of shareholders (Schleifer and Vishny, 1997) and protection from hostile takeovers and the necessity of employment of costly defensive measures arising in a market-based system (DeAngelo and Rice, 1983). Banks are also well positioned to provide optimal inter-temporal risk sharing services that exert benefits on resource allocation (Allen and Gale, 1997 and 2000). In contrast proponents of market-based systems argue that banks exert too much control and leverage over firms leading to a sub-optimal allocation of resources (Hellwig (1991); Weinstein and Yafeh (1998)). Black and Moersch (1998) argue that the long term relationship of banks and protection of firms from the discipline of the market actually supports inefficient managers and stymies potential technological innovation. A third strand of this finance-growth literature emphasises the mutually reciprocal nature between banks and stock markets. In general arguments supporting bank-based systems are based on the merits of banks providing inexpensive basic risk management services for standardized situations they tend to lack the flexibility that market-based systems possess in tailor-making financial products. Furthermore Levine (1991) and Bencivenga et al (1996) find evidence that the effectiveness of stock market-based systems is dependent on liquidity rather than size, or market capitalization further emphasising the mutual interdependence between banks and stock markets.

While there is considerable evidence of the effect of finance on growth (Eschenbach, 2004) this is generally from cross sectional panel studies as opposed to from the application of time series techniques. However the models developed in the growth literature for the most part do not take into account the effects of income distribution and levels of prevailing poverty (Levine, 2005). (This is an important point. Has there been any literature on ecological impacts or on public health as well? I seem to recall that possibility. ) This has spawned a more recent literature centring on political economy and wealth distribution effects though there are conflicting viewpoints as to the benefits arising from financial development. Authors such as Banerjee and Newman (1993), Galor and Zeira (1993) and Aghion and Bolton (1997) view the innovative nature of financial development as exerting substantial benefits on the poor where improved access to financial services and products reducing informational asymmetries that exist facilitate capital flow to otherwise wealth-deficient entrepreneurs. However in contrast authors such as Lamoreaux (1986) and Haber (1991) cite that access to finance is a critical determinant of the early stages of enterprise development and is largely constrained to the limits of the political economy and those who have political connections. As such those with connections are those who are able to achieve finance thereby realizing entrepreneurial opportunities, technological innovation and capital accumulation thus further propagating the disparity in income and wealth distribution in society.

While much of development policy is rooted in the principles of neoclassical economics which itself has evolved into an explicit attempt in incorporating the costs of transacting with incomplete information such as Nash equilibrium and Game Theory (Nash, 1951) a separate literature regarding the role of institutions in mitigating transactions costs has developed.

This has evolved from its core focus of the basic unit of analysis being the transaction (Commons, 1934) and is primarily concerned with the institutional governance of the agent's party to the transaction. This governance apparatus is essential for mitigating potential opportunism in agent behaviour and in minimising informational search and verification costs and typically relies on both informal as well as formal institutions. The former is defined as the deeply embedded values and behavioural norms within a society which is reflected in language and culture (Williamson, 2000) while the latter is more legally defined codes and formal governance directives that can be changed and redefined comparatively quickly (North (1991); Williamson (2000)). The New Institutional Economics (NIE) literature argues that economic development is associated with a higher frequency of more complex transactions bearing greater asset specificity and it is only the presence of well-defined and effective institutions, both formal and informal, which ensures that firms are willing to engage in more frequent and higher risk transactions over time (North (1990, 1991); Williamson (1996)). Furthermore the NIE agenda seeks to overturn the neoclassical concept of instrumental rationality, i.e. that myopic self-interested agents act in rational utility maximising manner (Williamson, 2000). However North (1991) cautions that there is no guarantee that the rigid institutions established to impose constraints on human interaction will themselves be efficient although they serve a social purpose in the light of human agents inability to process all available information and in a world of incomplete contracting. This results in human agents relying on deeply embedded societal institutions in the form of religion, behavioural norms, values and ideologies in governing interactions with other agents. In a zero-transaction cost world bargaining strength does not affect the efficiency of outcomes, while the opposite is true when costs exist and this shapes the direction of longer term political economy and economic development. This leads to the development of the concept of path dependence and the relationship between politics and economy owing to network externalities, economies of scope and complementarities that exist within a given institutional matrix (North, 1991). North (1991) argues that this in turn defines economic development.

The Buddhist monastic economy of Bhutan is distinctive in having only very recently opened itself to the outside world through the selective transplanting of economic and political institutions primarily from the common law countries of India and UK. While this has preserved much of the deeper societal level informal institutions it has been further enforced through the national adoption of the GNH at the core of government development policy which was developed primarily as a defensive reaction against global neoclassical modernization agenda and capitalism (Braun et al, 2009). However GNH policy directives despite their universal adoption represent only the highest level of governance institutions as defined by Williamson (2000) while the deeper more pervasive monastic culture enforcing altruism and notions of wider spiritual identity are more formative in the Bhutanese societal matrix.

Buddhism is fundamentally different from many of the world's other religions in holding to a proposition of destiny after life as leading to either heaven or hell. Rather life itself is a transient metaphorical state within an ongoing sequence of reincarnations and re-births. An individual's transition through rebirth and their destiny is determined by their level of karma which from physical human birth is deposited in the human heart (atman) (Lewis (1996); Dorji (2008); Keown (2005); French (2002)). Buddhism also opposes the idea of a soul, is very individualistic, is focused on unity versus dualistic opposites and is based on impermanence of reality. Social justice is enforced by the needs of an individual to behave in a manner that will benefit both the individual and society in order to boost levels of karma both for themselves and also for those immediately related whose own level of karma is affected by the individual. Furthermore a critical issue for Buddhist devotees is the necessity to achieve enlightenment which happens through addressing Four Noble Truths within an Eightfold path. The Four Noble Truth include all existence is suffering, suffering is caused by craving, suffering can have an end, and the way to end suffering is through the Eightfold path. The Eightfold Path includes Right View, Right Resolve, Right Speech, Right Action, Right Livelihood, Right Effort, Right Mindfulness, and Right Meditation. Acts following the Eightfold Path include Dana or giving or generosity. It also includes Ahisma or non-harming or non-violence and compassion embodied by all school of Buddhism but particularly the Mahayana school. Compassion includes loving kindness, compassion, sympathetic joy, and equanimity. As a consequence the ultimate destiny for Buddhist devotees is the state of Nirvana, which is often only attainable after many rebirths and subsequent spiritual purity once there is no karma remaining in the human being (Lewis (1996); Dorji (2008); Keown (2005); Rose (1977)). It is these more pervasive beliefs upon which the informal institutions in Bhutanese society are founded. While they act as a source to inform GNH policy directives they are more embedded due to the generic nature and universal applicability of the GNH principles that by design are more generalisable in application to a wider global audience. Under GNH, for example, there is an expectation to balance the by encouraging the development of the spiritual requirements of the individual with material requirements such as adequate health care, environmental protection, and equitable wealth and income distribution.

## South Asian Stock Markets

### South Asian exchanges

The major stock markets across South Asia are linked by membership to the South Asian Federation of Exchanges (SAFE), which acts to promote regional initiatives such as the gradual harmonization of accounting and governance standards. However while both Dhaka and Chittagong exchanges in Bangladesh and the exchanges of Lahore, Islamabad and Karachi in Pakistan are SAFE members, membership is restricted to only the two largest Indian exchanges, namely Bombay and the National Exchange despite the presence of 24 smaller exchanges spread throughout India. In addition while many South Asian societies are strongly influenced by deeply embedded religious beliefs, such as Islam in Pakistan and Hinduism in India, that characterize informal institutional development the markets of Sri Lanka and Bhutan are distinct in their adherence to Buddhist beliefs and institutions owing to sizeable Buddhist populations (see Table 1).

While the South Asian region has some of the largest stock exchanges in the world in absolute terms, such as that of Bombay with 4,921 listings, the size in relation to the overall economy (GDP) which provides an indication of the stock market's importance in business financing tends to be very low and with the exception of Bombay (53.16%) and India's National Stock Exchange (46.69%) are generally substantially lower than 20%. Furthermore liquidity levels, indicated by turnover ratios, are very low and generally much lower than 20% with the sole exceptions of Bangladesh's Dhaka (63.99%) and India's National exchanges (95.02%). Generally the evidence in Table 1 suggests that while development policy across South Asia is focussed on the establishment of stock markets and their attraction of listings that they remain comparatively small in size and low levels of activity inferring that business finance is sourced from internal means or from relationship based banking sectors. Table 1: See appendix.

**The Royal Securities Exchange of Bhutan**

The Royal Securities Exchange of Bhutan (RSEB) was established in October 1993 as a non-profit making entity with four licensed broker members and the Royal Monetary Authority (RMA) of Bhutan acting as a securities exchange commission, or de-facto regulator. The mission statement of the RSEB states the essentially neoclassical institutional development goals for the exchange to play an integral part of the financial system and for the development of a transparent, orderly securities market with the efficient mobilization and allocation of capital (RSEB website, 2010a)

The original establishment of the exchange was motivated by the need to create an active capital and money market within the kingdom and was facilitated through the donation of technical assistance of the Asian Development Bank (ADB). Bhutan's economic development policy is guided by its philosophy of GNH that is predicated on the four pillars of sustainable economic development, cultural preservation, environmental protection, and good governance (RGB, 2010). The development and restructuring of institutions supporting the RSEB has been undertaken in 2009/2010 in order to improve the operational efficiency of the market with this policy fitting within the concepts of economic growth and promotion of good governance envisaged in GNH (RGB, 2010). Notably training of RSEB, RMA and broker personnel has been undertaken in other Buddhist influenced markets such as the stock exchanges of Thailand, Sri Lanka and Singapore (ADB technical assistance report, 1995). Trading is automated in an order-driven system but in line with limited demand and activity is limited to Tuesday and Friday from 11am while a central depository housed in the exchange premises has managed to achieve almost fully dematerialised trading in the market (RSEB website, 2010). Since the relatively recent creation of a Bhutanese national currency, the Ngultrum, this has had a fixed peg relationship with the Indian Rupee mitigating foreign currency exposure between the two countries and greatly facilitating cross-border exports from the small open economy. Bhutan also never had a colonial relationship with a foreign metropole although it was considerably influenced by British colonial institutions in neighbouring India, which is exemplified with British mediation in the 1904 to 1907 political transition from Buddhist theocracy to hereditary monarchy. As a direct consequence it has had many of its modern institutions transplanted from neighbouring India, Thailand or from the ADB which have taken the form of English common law legal codes prevalent across the South Asian region.

Corporate governance and regulation is undertaken through the combination of the Bhutan Companies Act 1989, Financial Institutions Act 1992 and active surveillance and regulatory enforcement by the RMA under a self-regulatory system (RMA website, 2010). However despite the political will motivating the drive to modernization in a country that only fully established a monetized economy in the 1960's much of the population retains deeply conservative Buddhist values that underpin a collectivist culture. This in turn is reflected in widely held altruistic economic motives of individuals based in the doctrine of GNH (Centre for Bhutan Studies (2009a, 2009b)). These issues are highlighted in the evidence from Table 2 where primary market activity of the RSEB is minimal with the only very occasional issue of rights and bonus issues of shares and a largely static number of listed firms from 2000 to 2008. The limited use of the RSEB in attracting new listings and as a source of capital is further highlighted in the overwhelming dominance of primary market activity by government debt, in the form of either RMS Bills or Government debt with only two debt issues by the parastatal Druk Air in 2003 and 2004.

Given the static nature of the exchange and its limited participation in economic activity the market capitalization to GDP ratio is commonly between 11 and 15% and the comparative dominance by the banking system is shown in the low ratios of market capitalization to money-plus-quasi money which are generally between 22 to 30%. The lack of liquidity in terms of trading activity is shown through the minimal traded value to market capitalization ratios of under 1% which would be intuitively expected given the indications of minimal demand for stock market products from extremely low levels of institutional savings in relation to GDP of under 12%. However the lack of order flow is also due to legal prohibition of foreign ownership of Bhutanese firms thereby placing greater emphasis on the involvement of meagre domestic institutional investors to boost liquidity. However there is evidence that this isolationist policy is changing through the recent establishment of India's Druk Punjab Bank in January 2010 with the explicit goal in attracting a greater proportion of foreign investment (American Public Media, 2010). However while institutional savings levels are minimal, which is largely a reflection in the only very gradual inclusion of the wider population in pension schemes the considerably higher savings to GDP ratio of between 20 and 30% is more reflective of the successful monetization of the economy and increased levels of adoption of bank accounts and familiarity with financial services products by general population. These statistics would indicate the relative strength and development of the banking system in contrast to the relative underdevelopment of a markets-based economy. Table 2: See appendix.

Further evidence relating to the cultural inhibitions arising from inherently collectivist cultures with well-defined social and cultural beliefs in relying on external stock market finance as a source of capital can be seen from Table 3. This shows that ownership of firms in the Bhutanese market is dominated by block shareholders in the form of government or promoters, otherwise known as corporate insiders or corporate block-shareholders. The majority of shareholders in the public domain are characterised as either local financial institutions or local institutional investors, namely the national insurance company and national pension fund. However despite the very low levels of trading activity as evidenced earlier from Table 1 the proportions of free float market capitalization, or shares available in public domain, is very high for small developing markets and generally over 30% for all stocks bar three – namely those of Bhutan Dairy & Agro Products, Druk Petroleum Co and Bhutan Times Ltd which are less than 20%. Overall these results would indicate that the Bhutanese market on the surface shares many of the characteristics of other very small markets (Hearn and Piesse, 2009) where ownership is largely dominated by corporate insiders or block-shareholders owing to poorly defined property rights governing the transactions (Boulton et al, 2009). While much of the rural population would be unable to access the stock exchange or even more general financial services the almost complete lack of information on the exchange's activities with the website only having been completed in 2009 infers transactions costs, in the form of search and verification, are substantial. In part due to these issues the financial transactions amongst the indigenous population are governed by informal institutions defining the culture, values and behavioural norms inherent in the ancient monastic Buddhist traditions that is also manifest in the doctrine of GNH (Centre for Bhutan Studies (2009a, 2009b)). This is further reflected in Table 3 as those firms with higher free float percentages and thus higher levels of ownership in public domain also have higher absolute numbers of shareholders reflecting that the need for enhanced control is not so much of a concern for the listed entities. Equally given the strength of informal institutions that characterize the business environment the implications for corporate governance are significant in reducing agency costs between principals (owners) and incumbent management (agents). As such corporate governance largely relies on the concepts of corporate stewardship reflecting these common shared values (Hofstede (1980); Huff and Kelley (2003)). (One implication of the restrictive investment policy of Bhutan is that it has historically been isolated but also that is keen on protecting cultural values through the institution of GNH and other restrictive and protectionist laws.) Table 3: See appendix.

## Constraints to market development

The previous section highlighted that the stock market does not operate efficiently largely due to poorly defined property rights and an apathetic investor base itself made up from a small urban population with sufficient disposable income to act as savings. This section further elaborates on a number of limitations constraining market development and outlines why essentially neoclassical market-based development institutions are superfluous in a society dominated by informal Buddhist institutions oriented toward GNH.

### Difficulties in supply of investment opportunities

The evidence from Table 4 reveals that as intuitively expected the very small largely inactive stock market is only a minimal source of finance for domestic firms through new equity issues, which include IPOs, rights and bonus issues of shares, in contrast to the commercial lending from the banking sector. However the amount of commercial lending itself is only 2 or 3 times greater than the tiny amount raised through new equity issues and is itself severely constrained by excess liquidity and a proportion of non-performing loans to total loan amounts as high as 12% per year (RMA Annual report, 2008). This provides some indication of the difficulties of the existing banking model of development finance in both accessing the wider population while itself falling victim to being largely alien to the indigenous informal institutions that are best suited to administer finance effectively. The overwhelmingly dominant source for business finance in Bhutan is from loans administered by government, the financing of which has to a large degree come from being recipient to overseas aid flows. The dominant role of India in terms of trade and economic relations can be seen in terms of the majority of aid financing in the other investment category originating from this single country. However despite the close links between the two countries India provides only a minimal amount of foreign direct investment (FDI) in Bhutan with the majority coming from either regional or overseas sources which are primarily Indian. Portfolio finance is minimal with the value of US$ -18.34m in 2001 being attributable to investment in US stock markets. Equally no corporate debt was issued in Bhutan with the two values of US$ 25.55m and US$ 21.88m having been raised by the parastatal national airline Druk Air in order to part finance acquisition of new fleet. The overall evidence from Table 5 is largely unique in small developing countries where banking systems tend to dominate stock markets in the domestic provision of business finance. In the Bhutanese case the government is the principal source of finance with FDI a distant second place and the banking sector trailing a long way behind. This provides the strongest evidence of unusual cultural features of Bhutan where external finance is not favoured and industrial development is largely driven by government intervention. Table 4: See appendix.

Table 5 provides evidence regarding the listed firms on the Bhutanese exchange. The lack of activity is reflected in the age of the listings themselves with 13 of the 19 listed firms having been listed since the mid 1990's. The market capitalization profile of the exchange is skewed with 4 firms alone accounting for over 77% of market capitalization. However this becomes even more concentrated in terms of trading activity and traded value where 2 firms account for 87.14% of traded volume and 89.05% of traded value. As a result of these issues the debt to equity ratio of many firms is high while the cost of equity estimated from accounting book data using the Gordon and Shapiro (1956)[1] dividend capitalization method is extremely high providing strong evidence of the exchange in being an ineffective source of external finance. Costs of equity are particularly high for firms engaged in mining reflecting the higher risks from extractive related industrial projects such as Jigme Mining Corporation and S. D. Eastern Bhutan Coal Company Ltd. However given such costs of equity that are used to discount expected cash flows arising from industrial development projects the stock exchange is an uncompetitive source of external finance for firms. This provides further support for the earlier evidence from Table 5 where government loans and FDI were found to be the dominant sources of external finance. It is also particularly revealing about the potential extremely limited impact of capital markets finance in the modernization process of a Buddhist monastic economy in a staunchly collectivist society. Table 5: See appendix.

**Limited diversification and demand for investment opportunities**

The institutional investment community in Bhutan is largely confined to the National Pension and Provident Fund and the Royal Insurance Corporation of Bhutan. The evidence from the first panel of Table 6 reveals that levels of institutional savings as a proportion of GDP are extremely low in the kingdom and commonly less than 12% of GDP. A fundamental difference between Bhutan and most other smaller developing countries is that the core Buddhist social values ensure a strong sense of altruism to permeate all levels of society with emphasis on extended families and the provision of care for elderly family members as well as their continued active role within the core family unit post-retirement (NPPF Annual report, 2008). This is likely to have caused the very slow comprehension of pensions by the wider

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[1] See Brealey, Myers and Allen (2008) for a detailed analysis.

population in addition to their being limited in accessing pensions through the necessity of being engaged within the formal sector. Consequently while there has been a considerable increase in the numbers of contributors to the NPPF pension fund most of these are government employees in the civil service or armed forces. Bhutan is also largely unique in having a single institutional pension fund, namely the NPPF, with various government and corporate entities members electing to join.

The evidence in terms of portfolio asset allocation of the NPPF pension fund is revealed in the second panel of Table 6. The national pension portfolio allocated 5% of investment in domestically listed equities in 2004 that dropped to a minimal value of 3% in 2008. This is in stark contrast to the foreign US market investments that were allocated 26% of the portfolio investment funds in 2004 and 2005 prior to liquidation. The majority of non-lending domestic investment is in the form of short and long term cash deposits and Royal Government of Bhutan bonds with only a fraction invested in RMA issued bills. A substantial portion of investment is also undertaken in the form of member and project loans. These notably have a considerably lower proportion of non-performance, typically less than 1.50% as seen in panel 1, which is much lower than the national average for non-performing loans and can be attributed to strong enforcement of loan retribution (NPPF Annual report, 2008). The general picture points towards an embryonic institutional investment industry dominated by one provider, the national pension fund, whose asset allocation in domestically listed equity is generally less than 5% of total invested assets. This would indicate very weak demand for domestic stock exchange products and is a major factor in the prolonged inactivity of the exchange. Table 6: See appendix.

### Institutional fit with Gross National Happiness

The creation of a stock market culture is a common policy initiative in many smaller developing countries and often centres on stock market awareness initiatives in secondary and tertiary education institutions in order to engender an understanding amongst the next generation of entrepreneurs (Hearn and Piesse, 2009). However these efforts in promoting the benefits of essentially neoclassical institutions are often wasted in the light of an often apathetic society that is constrained by an institutional matrix promoting governance by informal institutions (North (1991); Williamson (2000)). Commonly essentially European neoclassical institutions are transplanted on indigenous cultures through colonial relationships (Joireman, 2001) or by conscious adoption (North, 1991). However given Bhutan's historical isolationist policy thereby largely preserving its unique culture and promotion of strong informal Buddhist governance mechanisms the societal matrix is at best apathetic to stock-market culture. Nevertheless, Bhutan in 2010 has at least recognized the need to strengthen its stock market to bolster sustainable economic development (including trade), which is one of the four pillars of GNH (RGB, 2010).

## Recommendations

This paper investigates the role of stock market financing within Bhutan's business environment characterised by deeply embedded Buddhist informal institutions that have received favourable recent media attention through their having been instrumental in the formulation of the principles of Gross National Happiness (GNH).

This study is timely owing to the universal adoption of stock-markets focussed development policy worldwide and with particular relevance to the issues encountered in smaller markets and those with distinctive indigenous cultures and informal institutions.

While the prohibition of foreign ownership, lack of domestic institutional investors and limitations in accessibility of stock exchange for much of the population act as constraints to market activity the institutional causes for this are significantly different in Bhutan's case than for other smaller frontier stock markets. The historic isolation of Bhutan and prevalence of ancient Tibetan Buddhist religious beliefs perpetuated through the largely monastic political economy forms a strong informal institutional matrix governing transactions and engendering a distinctive economic development. The dominance of these informal institutions reinforces the altruistic and collectivist nature of Bhutanese society causing apathy towards the transplanted neoclassical institutions supporting stock market finance. Government is best placed through the doctrine of GNH to administer the provision of finance. This is in preference to either the banking system or stock market given the unique nature of government in Bhutan where owing to the dominance of monastic culture and informal institutions there is less formal divide between public sector central government and the private sector.

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*Table1. Characteristics of South Asian stock markets, 2008*

| | Buddhist ratio (%) | Est. | No. Listings | Mkt. Cap. (US$m) | Mkt. Cap. as % of GDP | Traded value (US$m) | Turnover ratio (%) |
|---|---|---|---|---|---|---|---|
| Panel 1: South Asian Markets | | | | | | | |
| India | -- -- | | | | | | |
| Bombay | | 1956 | 4,921 | 647,204.80 | 53.16% | 44,011.03 | 6.80% |
| National SE | | 1992 | 1,301* | 568,439.00 | 46.69% | 540,142 | 95.02% |
| Kolkata | | 1908 | 2,761 | 5,823.78 | 0.48% | -- -- | -- -- |
| | | | | | | | |
| Pakistan | -- -- | | | | | | |
| Karachi | | 1947 | 653 | 23,500.00 | 13.97% | 350.00 | 1.49% |
| Lahore | | 1970 | 511 | 8,667.14 | 5.15% | -- -- | -- -- |
| Islamabad | | 1989 | 261 | 7,239.96 | 4.30% | -- -- | -- -- |
| | | | | | | | |
| Sri Lanka | 69.10% | 1984 | 235 | 4,285.90 | 10.53% | 1,022.60 | 23.86% |
| Bangladesh | -- -- | | | | | | |
| Dhaka | | 1954 | 276 | 15,138.51 | 19.16% | 9,687.67 | 63.99% |
| | | | | | | | |
| Mauritius | -- -- | 1988 | 97 | 2,645.90 | 30.58% | 150.28 | 5.68% |
| Maldives | -- -- | 2002 | 4 | 172.99 | 13.73% | 2.68 | 1.55% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| Nepal | 10.70% | | | | | | |
| Main board | | 1937 | 149 | 4,682.87 | 14.74% | 291.79 | 6.23% |
| Gov. Debt | | 1964 | -- -- | 77.99 | 0.25% | 0.00 | 0.00% |
| Corp Debt | | 1964 | -- -- | 22.06 | 0.07% | 0.00 | 0.00% |
| | | | | | | | |
| Bhutan | 75.00% | 1992 | 17 | 116.30 | 8.50% | 0.68 | 0.58% |
| | | | | | | | |

*Source: National stock exchange websites.*

Notes:

(1) *indicates Capital Market segment.

(2) Many Indian stock exchanges were established during 1800’s as colonial stockbrokers associations.

(3) Buddhist ratio indicates proportion of total population that are Buddhist (CIA World Fact Book, 2010).

*Table 2: Descriptive Statistics - the Royal Securities Exchange of Bhutan, 2000-2008*

| DATA | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|---|---|
| PRIMARY MARKET EQUITY | | | | | | | | | |
| Funds raised IPO (US$m) | 0.65 | 0.70 | 2.42 | 9.03 | -- -- | 1.16 | 3.41 | 2.07 | 5.54 |
| Funds raised from Rights issues (US$m) | -- -- | -- -- | -- -- | -- -- | -- -- | -- -- | 0.34 | -- -- | -- -- |
| Funds raised from Bonus issues (US$m) | -- -- | -- -- | -- -- | 1.80 | -- -- | -- -- | -- -- | -- -- | -- -- |
| | | | | | | | | | |
| PRIMARY MARKET DEBT | | | | | | | | | |
| RMA Discount Bills (US$m) | 39.21 | 33.68 | 79.83 | 48.16 | 13.14 | 13.18 | 11.16 | 133.38 | 163.53 |
| Gov. Discount Bills (US$m) | -- -- | 10.41 | 10.50 | 11.05 | 11.05 | 6.65 | -- -- | -- -- | -- -- |
| Parastatal (US$m) | -- -- | -- -- | -- -- | 25.55 | 21.88 | -- -- | -- -- | -- -- | -- -- |
| Gov. Bonds (US$m) | -- -- | -- -- | -- -- | -- -- | -- -- | -- -- | -- -- | -- -- | -- -- |
| | | | | | | | | | |
| SECONDARY MARKET | | | | | | | | | |
| Shares traded (shares) | 27,977 | 157,151 | 75,043 | 42,156 | 284,075 | 49,198 | 133,387 | 50,531 | 77,123 |
| Market cap. (US$m) | 50.53 | 61.27 | 72.28 | 78.10 | 95.03 | 99.05 | 104.42 | 127.52 | 152.72 |
| Value traded (US$m) | 0.55 | 1.64 | 0.81 | 0.44 | 2.40 | 0.46 | 0.82 | 0.65 | 0.62 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| LISTINGS EQUITY | | | | | | | | | |
| Listed companies | 15 | 15 | 15 | 15 | 15 | 16 | 16 | 16 | 19 |
| No new listings | -- -- | -- -- | -- -- | -- -- | -- -- | 1 | -- -- | -- -- | 3 |
| No. De-listings | -- -- | -- -- | -- -- | -- -- | -- -- | -- -- | -- -- | 1 | -- -- |
| | | | | | | | | | |
| RATIOS (%) | | | | | | | | | |
| Market cap./GDP | 11.81% | 13.44% | 14.12% | 13.42% | 14.00% | 12.85% | 11.97% | 12.15% | 11.23% |
| Market cap./money + quasi-money | 23.75% | 27.48% | 25.30% | 25.52% | 25.90% | 24.06% | 22.11% | 21.21% | 31.09% |
| Traded val./Market cap. | 1.09% | 2.67% | 1.12% | 0.57% | 2.53% | 0.46% | 0.79% | 0.51% | 0.41% |
| Savings rate/GDP | 30.00% | 25.82% | 27.61% | 26.87% | 27.81% | 27.60% | 27.48% | 20.97% | 20.84% |
| Institutional Savings (Pension)/GDP | 9.84% | 10.52% | 10.79% | 11.89% | 11.85% | 11.65% | 11.90% | 12.52% | 9.15% |

*Source:Compiled by the authors from the Royal Securities Exchange of Bhutan website, World Bank development database and National Provident Fund Bhutan website.*

Notes: (1) Parastatal issues in 2003 and 2004 are 10 year maturity bonds (7.5% coupon) for Druk Air Corporation Ltd for new aircraft; (2) RMA Discount Bills are issued by Royal Monetary Authority for 90/91 days at discount rates between 3 and 11% per annum; (3) Gov. Discount Bills are issued by Royal Government of Bhutan for 1 year at coupon rate of 7%; (4) Savings rate is amount of time, savings and foreign currency deposits in US$m.

*Table3. Ownership of listed equities on Royal Securities Exchange of Bhutan, 2008*

| | No. shareholders | Block shareholders | | Public Domain shareholders | | | | Free Float % |
|---|---|---|---|---|---|---|---|---|
| | | Gov. | Corp. Block shareholders | Local Fin. Institutions | Domestic Inst. Investors | Foreign Inst. Investors | Individual Investors | |
| Bhutan Board Products Ltd. | 491 | 47.74 | -- -- | 13.26 | 10.42 | -- -- | 28.59 | 52.27 |
| Bhutan Carbide & Chemicals Ltd. | 259 | -- -- | 52.15 | 39.23 | 1.35 | -- -- | 7.26 | 47.84 |
| Bhutan Dairy & Agro Products Ltd. | 96 | -- -- | 92.73 | 2.66 | 1.06 | -- -- | 3.54 | 7.26 |
| Bhutan Ferro Alloys Ltd. | 44 | 25.73 | 12.35 | 8.69 | 41.00 | 12.00 | 0.23 | 61.92 |
| Bhutan National Bank Ltd. | 4,357 | 13.61 | -- -- | 2.10 | 37.61 | -- -- | 46.68 | 86.39 |
| Bhutan Polymers Company Ltd. | 129 | -- -- | 53.72 | 5.10 | 0.90 | -- -- | 40.28 | 46.28 |
| Bhutan Tourism Corporation Ltd. | 162 | -- -- | 34.43 | -- -- | -- -- | -- -- | 65.57 | 65.57 |
| Bhutan Times Ltd. | 288 | -- -- | 82.26 | -- -- | -- -- | -- -- | 17.74 | 17.74 |
| Druk Petroleum | 71 | -- -- | 98.50 | -- -- | -- -- | -- -- | 1.50 | 1.50 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Corporation Ltd. | | | | | | | | |
| Druk Plaster & Chemicals Ltd. | 213 | -- -- | 21.00 | -- -- | 46.00 | -- -- | 33.00 | 79.00 |
| Druk Satair Corporation Ltd. | 1,276 | -- -- | 34.93 | -- -- | 36.26 | -- -- | 28.81 | 65.07 |
| Druk Mining Ltd. | 67 | -- -- | 57.57 | -- -- | 23.03 | -- -- | 19.40 | 42.43 |
| Druk Wang Alloys Ltd. | 504 | -- -- | 65.00 | -- -- | -- -- | -- -- | 35.00 | 35.00 |
| S. D. Eastern Bhutan Coal Company Ltd. | 1,082 | -- -- | 70.00 | -- -- | -- -- | -- -- | 30.00 | 30.00 |
| Jigme Mining Corporation Ltd. | 426 | -- -- | 70.00 | -- -- | -- -- | -- -- | 30.00 | 30.00 |
| Kuensel Corporation Ltd. | 233 | 51.00 | -- -- | -- -- | 21.31 | -- -- | 27.59 | 48.90 |
| Penden Cement Authority Ltd. | 1,472 | 42.68 | -- -- | 1.82 | 30.76 | -- -- | 24.74 | 57.32 |
| Rotal Insurance Corporation of Bhutan Ltd. | 1,556 | 39.25 | -- -- | 0.37 | 5.96 | -- -- | 54.42 | 60.75 |
| State Trading Corporation of Bhutan Ltd. | 125 | 51.00 | -- -- | 11.96 | 9.90 | -- -- | 27.14 | 49.00 |

*Source: Royal Securities Exchange of Bhutan annual report 2008.* ***Notes****: (1) Free Float is the sum of all shareholdings in public domain.*

*Table 4. Sources of long term finance in Bhutan, US$m*

| | | | | Overall position | | | | Position with India | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | New equity listing | New debt listing | Comm. Bank lending to business | Foreign direct Investment | Portfolio investment | Other investment | | Foreign direct investment | Portfolio investment | Other investment | |
| | | | All maturities | | | o/w foreign aid (RGOB loans, | o/w Other loans, net | | | foreign aid (RGOB loans, | o/w Other loans, net |
| 2000 | 0.65 | -- -- | 0.00 | 0.00 | 0.00 | 37.32 | 0.00 | 0.00 | 0.00 | 32.72 | 0.00 |
| 2001 | 0.70 | -- -- | 1.97 | 0.00 | 18.34 | 48.07 | 0.00 | 0.00 | 0.00 | 35.54 | 0.00 |
| 2002 | 2.42 | -- -- | 2.16 | 2.13 | 0.00 | 59.77 | 0.00 | 0.00 | 0.00 | 39.13 | 0.00 |
| 2003 | 10.83 | 25.55 | 3.63 | 2.61 | 0.00 | 100.06 | 0.00 | 0.00 | 0.00 | 68.86 | 0.00 |
| 2004 | -- -- | 21.88 | 3.66 | 3.47 | 0.00 | 103.12 | 8.03 | 0.00 | 0.00 | 72.02 | 0.00 |
| 2005 | 1.16 | -- -- | 5.22 | 8.90 | 0.00 | 65.17 | 1.98 | 0.00 | 0.00 | 41.08 | 0.00 |
| 2006 | 3.75 | -- -- | 5.72 | 6.17 | 0.00 | 78.22 | 7.81 | 0.00 | 0.00 | 52.33 | 0.00 |
| 2007 | 2.07 | -- -- | 9.32 | 82.12 | 0.00 | 19.86 | -0.96 | 0.79 | 0.00 | -0.77 | 0.00 |
| 2008 | 5.54 | -- -- | 8.12 | 24.83 | 0.00 | -10.72 | 58.06 | 0.38 | 0.00 | -21.75 | 46.05 |

*Source:Compiled by authors from Royal Monetary Authority of Bhutan (RMA) annual report 2008. Notes: (1) New debt listing includes listing of parastatal Druk Air bonds and omits government or RMA debt. (2) New equity listing includes IPO, bonus and rights issues*

*Table 5. Royal Securities Exchange of Bhutan listed firms (US$m), 2008*

| | Date Listed | Mkt. Cap (US$m) | Traded Volume (shares) | Traded Value (US$m) | Debt to Equity ratio | Estimated Cost of Equity (%) |
|---|---|---|---|---|---|---|
| Bhutan Board Products Ltd. | 1993 | 2.66% | 0.13% | -- -- | 0.17 | 6.50% |
| Bhutan Carbide & Chemicals Ltd. | 1993 | 10.85% | 1.26% | -- -- | 2.64 | 2.04% |
| Bhutan Dairy & Agro Products Ltd. | 1994 | 0.19% | -- -- | -- -- | 9.80 | |
| Bhutan Ferro Alloys Ltd. | 1995 | 11.19% | 0.69% | -- -- | 4.21 | 41.20% |
| Bhutan National Bank Ltd. | 1996 | 19.29% | 62.3% | 69.9% | 41.07 | 23.35% |
| Bhutan Polymers Company Ltd. | 1997 | 0.34% | -- -- | -- -- | 0.89 | 28.03% |
| Bhutan Tourism Corporation Ltd | 1994 | 0.86% | 24.84% | 19.14% | 2.46 | 30.70% |
| Bhutan Times Ltd. | 2008 | 0.54% | -- -- | -- -- | -- -- | |
| Druk Petroleum Corporation Ltd. | 1995 | 0.10% | -- -- | -- -- | 5.45 | |
| Druk Plaster & Chemicals Ltd. | 2001 | 0.27% | -- -- | -- -- | 1.30 | 15.18% |
| Druk Satair Corporation Ltd. | 1998 | 1.86% | -- -- | -- -- | -- -- | 28.20% |
| Druk Mining Ltd. | 1995 | 0.22% | -- -- | -- -- | 5.33 | |
| Druk Wang Alloys Ltd. | 2008 | 2.27% | -- -- | -- -- | 1.51 | |
| S. D. Eastern Bhutan Coal Company Ltd. | 2005 | 2.12% | 3.87% | 1.80% | 0.07 | 50.65% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Jigme Mining Corporation Ltd. | 2008 | 3.09% | 0.23% | 0.47% | 0.38 | 53.78% |
| Kuensel Corporation Ltd. | 2007 | 0.68% | 0.28% | 0.07% | -- -- | 10.72% |
| Penden Cement Authority Ltd. | 1993 | 36.44% | 1.82% | 3.73% | -- -- | 14.01% |
| Royal Insurance Corporation of Bhutan Ltd. | 1993 | 6.51% | 4.54% | 4.86% | 10.04 | 20.00% |
| State Trading Corporation of Bhutan | 1997 | 0.52% | 0.04% | 0.03% | -- -- | 51.12% |
| | | | | | | |
| Total | | 152.72 | 77,123 | 0.62 | | |

*Source:Royal Securities Exchange of Bhutan annual report 2008*

Notes: (1) Cost of equity estimated via Gordon and Shapiro (1956) dividend capitalization method. Here, CE is again the cost of equity, where:

$$CE = \left( \frac{Dividends\ per\ Share\ (for\ the\ next\ year)}{Current\ Market\ Value\ of\ Stock} \right) + (Expected\ Dividends\ Growth\ Rate\ ) \quad (1)$$

and the retention ratio in equation (2) and return on equity in equation (3) are calculated using balance sheet data,

$Plowback\ ratio = 1 - Payout\ ratio = 1 - \left( \frac{Dividends\ per\ share}{Earnings\ per\ share} \right)$ (2) and $\mathrm{Re}turn\ on\, equity = \left( \frac{Earnings\ per\ share}{Book\ Equity\ per\ share} \right)$ (3) in the product used in equation (1).

*Table 6. Institutional savings in Bhutan and asset allocation (%), 2008*

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| **Panel 1: Ratios** | | | | | |
| Funds under investment (US$m) | 80.44 | 89.79 | 103.80 | 131.45 | 124.39 |
| Institutional savings (pension)/GDP | 11.85% | 11.65% | 11.90% | 12.52% | 9.15% |
| NPPF non-performing loans as proportion of total loan amount | -- -- | 0.67% | 1.48% | 1.38% | 1.16% |
| **Panel 2: Asset allocation** | | | | | |
| Bhutan | | | | | |
| Equities | 5.00 | 4.00 | 3.79 | 3.38 | 3.00 |
| Short term deposits | 21.00 | 7.00 | 7.33 | 13.55 | 7.00 |
| Long term deposits | -- -- | 7.00 | 14.10 | 12.54 | 11.00 |
| Member loans | -- -- | 16.00 | 18.57 | 22.12 | 22.00 |
| RGOB | 21.00 | 23.00 | 36.28 | 30.22 | 24.00 |
| Project loans | 27.00 | 19.00 | 19.22 | 17.02 | 33.00 |
| RMA Bills | -- -- | -- -- | 0.72 | 1.17 | -- -- |
| Foreign | | | | | |
| United States securities | 26.00 | 24.00 | -- -- | -- -- | -- -- |
| Total asset allocation | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

Source: National Provident and Pension Fund annual reports 2000-2009

Notes: (1) US investment is split 35% equity and 65% bonds. These were liquidated in 2005 in order to facilitate the financing of fleet of new aircraft for national airline Druk Air.