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A Review of the Maldivian Construction Industry

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A REVIEW OF THE MALDIVIAN CONSTRUCTION INDUSTRY

*by: Mariyam Rashfa**

Abstract

The construction sector of Maldives is vital sector of the economy and has been a key driver of economic growth. However, after witnessing a strong period of growth, the construction sector registered a marked turnaround in 2009, and since then the growth of the sector has remained weak and rather volatile. This paper analyses the recent developments in the construction sector of Maldives and examines the key problems and challenges faced by the sector. The analysis indicates that both demand and supply side factors have contributed to the slowdown. On the demand side, the main factor constraining growth has been the scaling down of public infrastructure projects, while sluggish growth in resort construction has also contributed to the recent slowdown. On the supply side, difficulties in access to bank credit, payment delays, shortage of skilled labour and fluctuations in raw material prices have all raised construction costs leading to project delays and cost overruns.

1. Introduction

The construction sector of the Maldives has been one of the most dynamic sectors of the economy. The sector's contribution to GDP has increased from an average of just 5.8% in the 2002 to 9.1% in the last ten years. However, after witnessing a strong period of growth, the construction sector has registered a marked turnaround, especially after the 2009 Global Financial Crisis (GFC) and the ensuing domestic downturn. Since then, the growth of the sector has remained rather volatile, declining twice during 2009–2012, due to various problems and challenges faced by the sector. While most of these reflect dynamic changes taking place in the business environment, particularly after the GFC, some of these relate to various capacity constraints facing the sector. More specifically, the main problems facing the sector include the cut-down in government spending on

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infrastructure due to budget constraints, difficulties in access to finance, fluctuations in the price of raw materials, shortages in skilled labour, payment delays for contractors, weaknesses in the regulatory framework and financing difficulties faced by resort developers.

Given the importance of the construction sector in the domestic economy, in terms of its potential to create jobs, stimulate other business activities and also due to its critical role in the provision of infrastructure needed for national development and socio-economic growth, the sustainable development of the sector will be important for supporting the long term growth of the economy. While noting the positive contributions of construction sector to the nation's development, it is also important to note the significant economic leakages from the sector due to the sector's excessive reliance on imports—both for labour and material. Against this background, this paper aims to develop a better understanding of the construction sector of the Maldives and examine the key problems and challenges facing the industry.

The analyses used in this paper are based on information gathered through interviews with the key stakeholders of the industry¹ and also various reports of national and international organisations. A major constraint in conducting this study has been the lack of time series data on key industrial and enterprise statistics of the construction sector such as annual turnover, profitability, employment, wages and prices.

The remainder of this paper is organised as follows. Section 2 will present an overview of the construction sector of the Maldives highlighting on recent developments in its output and the key features of the sector. Section 3 will provide an analysis of developments in the different types of construction projects undertaken in the Maldives. Section 4 will analyse and discuss the main problems and challenges faced by the construction sector, with a special focus on issues related to access to finance, labour and raw materials. Finally, section 5 will provide some concluding remarks.

¹ This includes fifteen large construction companies, major credit lenders to the construction sector, the Ministry of Housing and Infrastructure, Hulhumale' Development Corporation, the Maldives Association of Construction Industry (MACI)

2. Overview of the construction industry

2.1 Definition of the construction sector

In the compilation of the national accounts statistics of the Maldives, the activities of the construction sector are classified as per the International Standards Industrial Classification (ISIC Rev 3.0). According to ISIC Rev 3.0, the activities of the construction sector are divided into 4 subsectors, which are:

- site preparation;
- the building of complete construction and civil engineering;
- building installation, building completion (includes the renovation, repair and maintenance of buildings) and
- renting of construction or demolition equipment with operators.

Of these 4 subsectors, site preparation and renting of construction equipment accounts for the least value added while building of complete construction and civil engineering subsector also known as general construction involves the core activities of the construction sector.

In the Maldives, the value added for the construction sector is estimated by extrapolating the baseline estimates of the sector², using three indicators, which are total imports of building materials³, the number of expatriate labour employed in construction and area of buildings approved for construction.

2.2 Developments in the construction sector value added

Starting from the early 2000s until mid-2008, the construction sector of the Maldives witnessed unprecedented growth rates, driven by both private and public sector activity. In particular, during 2004–2008, the construction sector grew robustly at an average annual rate of 25% (figure 1), much higher than an average of around 11% during 1996–2000. Key drivers of the sector during this period include the launching of large-scale

2 The baseline estimates are based on information derived from Large Establishment Survey 2004, Financial Statement of companies, Small Establishment Survey 2002/2003 and administrative data from Maldives Customs Service.

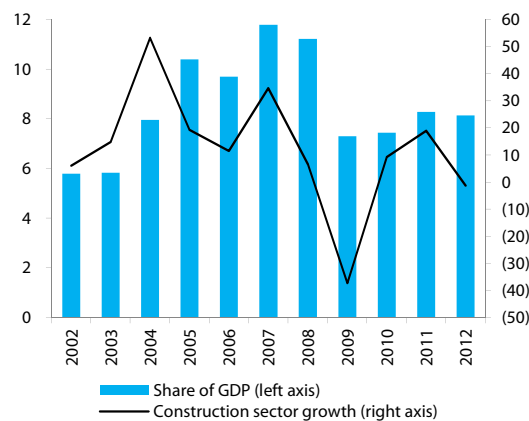
3 This is derived by deflating changes in the average monthly imports of building materials per year by the changes in unit-value index of imports of building material.

public sector projects such as the development of Hulhumale', massive reconstruction efforts following the 2004 tsunami, the boom in residential construction in Male' and Hulhumale' and the commencement of several resort construction projects following the leasing of new islands for resort development by the government since 2004.

However, with the bulk of tsunami reconstruction almost reaching an end in 2008 the construction sector began to show signs of slowdown starting from mid-2008. The situation was further aggravated by the sharp increases global construction raw material prices during 2005-2008 and due to the impact from GFC and the domestic downturn in 2009. For example, resort construction activities, which relies extensively on external funding, was almost brought to a standstill due to the global credit crunch, while many public sector infrastructure projects had to be scaled down or deferred owing to fiscal austerity. As a result, the output of the construction declined sharply by 37% in 2009.

Since 2009, the performance of the sector has been rather erratic. While growth rebounded strongly and remained positive through 2010–2011, due to the resumption of government infrastructure projects and strong demand for residential construction, it declined once again in 2012. The decline in construction sector output since 2011 has been mainly attributable to budget constraints faced by government and also the ongoing difficulties faced by resort developers in securing finance for the new resort development projects. Meanwhile, despite the subdued growth in public sector projects

Figure 1 : Construction Sector Growth and Share of GDP, 2002–2011
(in percent of GDP, annual percentage change)



Source: Department of National planning

and resort construction, the residential construction on the other hand has remained more vibrant. The buoyant growth in residential construction has mainly been influenced by government's efforts in providing affordable housing to the people through direct supply of social housing by the government and the facilitation of housing delivery by the private sector. A more detailed discussion on the developments in the different types of construction projects will be provided in the Section 3 of this paper.

2.3 Key characteristics of the sector

The construction sector is among one of the most important sectors of the Maldivian economy. As mentioned earlier, it contributes significantly to GDP and also plays a vital role in delivering the basic infrastructure needed for socio-economic development. In this regard, it covers the construction of roads, highways, harbours, ports, bridges, tunnels and other civil works and also the building of factories, houses, offices, schools and apartments. In addition to the direct contribution of construction sector to the economy, the sector also contributes indirectly through its linkages to other sectors of the economy, ranging from the suppliers of construction materials, architectural and real estate services. Apart from the positive contributions of construction sector to the Maldivian economy, the sector also has several economic leakages due to the sector's excessive reliance on imports (both for materials and labour).

Output

As in the case of many other countries, an important characteristic of the construction sector of Maldives is the cyclical nature of construction activities. This is because it depends to a large extent on government programmes; business and consumer confidence; and financing conditions or availability of credit. As a result of this, the output of the sector is often subject to large fluctuations in the business cycle and other external developments. For example, in the case of Maldives, the developments in the construction sector are closely linked to developments in the tourism sector, while it is also highly influenced by government spending on infrastructure development. Another important feature of the construction sector of the Maldives is its significant dependence on imports since almost all building materials, such as cement and aggregates, base metals and wood, have to be imported. This makes the industry highly vulnerable to fluctuations in global commodity prices and changes in the exchange rate.

Enterprise structure

There are no recent enterprise data on the construction industry of Maldives. However, according to the *Economic Survey 2007*, there were a total of 1,638 enterprises⁴ in the construction industry in 2007 which are mostly small and medium enterprises (SMEs). Twelve per cent of these establishments were classified as small (less than 10 workers), 50% as medium (10–99 workers) and the remaining 38% as large firms (over 100 workers). Although most of the firms were classified as SMEs, over 70% of the industry workforce was employed by the larger firms which generated about 90% of the industry turnover and value added. While most major construction projects are undertaken by the larger firms or a general contractor, a considerable portion of the work are sub-contracted to smaller and more specialised groups. This is because of the dynamic nature of the different construction projects and the specialised skills required in performing the jobs. For example, resort construction projects require a high level of craftsmanship and are often managed by a general contractor or a project coordinator (usually the owner of the resort) who sub-contracts certain aspects of the project to smaller more specialised groups. (see Box 1)

Box 1

Maldives Association of Construction Industry (MACI)

Recognising the importance of taking measures to improve the performance of the construction industry, the MACI was formed in 2001 as an industry initiative with the mission to develop, promote and strengthen the construction industry of the Maldives. Since 2003, MACI has been actively engaged in the improvement of the sector through dialogue with the government on tackling disputes related to contracts and issues related to labour and also in introducing construction standards. It has also been collaborating with the government in training and development of locals through providing internships. It has an elected executive board of 11 members to manage and organise its activities. At the end of 2012, there were 134 members registered in MACI¹.

1 Interview with MACI, 2012

4 The establishments covered under the Economic survey 2007 also include establishments that are operating without a physical location to carry out their activities

Employment

The activities involved in the construction sector are very labour intensive, making it a significant contributor to industrial employment in many countries.⁵ Meanwhile, it is also a sector which is characterised by the existence of a large expatriate labour force, such as in many Gulf countries.

According to the *Household Income and Expenditure Survey 2009-2010 (HIES 2009-2010)*, the construction sector of the Maldives employed about 5% of the total local labour force in 2010. Out of the total workforce of the construction industry, expatriate employment accounted for 88% in 2010 compared to 75% in 2006. During this period the total number of locals employed in the sector saw a decline of 18% and totalled 4,459 workers, while the number of registered expatriate labour nearly doubled to 31,866. With this large increase in expatriate labour force, the construction sector has now become the single largest employer of the country's expatriate labour force (accounting for 43%). Although most expatriate workers in the construction industry are employed as labourers, a significant portion is also employed under the skilled crafts level category, partly reflecting shortages in local craftsman.

As for the nationality of expatriate workers, majority of them are from neighbouring countries of Bangladesh, India and Sri Lanka, obtained at a cheaper cost, since the cost of living in these countries is much lower than the Maldives.

3. Types of construction projects undertaken in Maldives

In the Maldives, the types of construction projects can be categorised as residential buildings, non-residential buildings, civil engineering and resort construction. Of these, resort construction and public sector infrastructure projects form the bulk of construction activity in Maldives, although since the early 2000s residential construction (funded by both the government and private sector) has contributed significantly to the growth of the construction sector.

⁵ The construction industry is Europe's largest industrial employer, accounting for about 7% of total employment, and in the EU, the US and Japan combined, it employs more than 40 million people. Among all OECD countries, the construction industry accounts for an average of 6.5% of GDP. (OECD)

3.1 Residential buildings

The residential construction projects cover the construction of dwellings by private individuals, developers and government. Until the early 2000s, activity in the residential construction has been dominated by private housing projects (mostly by individuals) which were generally financed through the domestic banking sector. However, with the commencement of development of housing units in Hulhumale' in 2003, public sector residential projects have also increasingly contributed to the growth of this sector. The bulk of public sector housing projects were undertaken in Hulhumale' while some major projects have been initiated in Male' and in other urban centers in the atolls. Although some of the public sector projects have been financed directly through the government budget, others were financed through Housing Development Finance Corporation (HDFC), Public Private Partnerships (PPP) and foreign loans.⁶

Developments in the residential buildings sector

The residential construction has witnessed a boom in construction activity since 2003 both in the Male' (Table 1), Hulhumale' and in some other islands. The rapid growth in residential construction witnessed in Male' and Hulhumale' reflected the increase in demand for rental accommodation in Male' and changes to government policies affecting housing construction. This includes the direct supply of social housing by the government and the facilitation of affordable housing through provision of land (land reforms⁷ and the development of Hulhumale') and introduction of housing finance schemes such as the formation of HDFC (see Box 3). Activity in the residential construction was also boosted by the massive repair and reconstruction of housing units damaged by the 2004 tsunami. More than 8,500 housing units were damaged or completely destroyed during the tsunami, of which, 5,700 houses required repairs and 2800 new houses needed to be reconstructed (DNP, 2009). Despite considerable delays in housing reconstruction,

6 The majority of the public sector housing projects are undertaken in Hulhumale' by the Housing Development Corporation (HDC) while a number of projects are also being underway in Male' and in other urban centers. The projects underway in the atolls include the reconstruction of housing units in the three remaining islands that were completely destroyed by the 2004 tsunami and also a number of other housing units being built in other urban centers to support de-congestion in these areas – this includes the Phase Two of the development of Four Thousand Housing Units programme in the Maldives initiated by government in 2010. The public sector residential projects underway in Male' includes housing units being built under the Veshifah Male' Programme launched in 2011, which is a PPP initiative between the government of Maldives and a foreign investor with the aim of developing 10,000 housing units in 4 locations of Male' to alleviate the acute shortage of housing in Male'. Under the Phase One on Four Thousand Housing Units in Maldives project, 1,000 units were developed in Hulhumale' and handed over to government 2012.

7 Enactment of land law in 2002 and its subsequent revisions.

mainly owing to significant escalation in material prices (which more than doubled), most of the repair and reconstruction of houses were complete by the end of 2008⁸.

With most tsunami-related housing construction complete,⁹ residential construction registered a marked slowdown and suffered a major setback in 2009 due to the tight availability of financing, both for individuals and developers, on the back of the GFC (see Table 1). However, with the revival of housing finance, activity in residential construction rebounded in 2010 and has since then remained strong in Male' and Hulhumale'.

Table 1: Buildings Authorised for Construction and Completed in Male', 2002–2012

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Authorised Buildings											
No. of Dwellings	452	619	843	513	593	506	504	485	436	322	273
Floor Area (thousands of sqm)	180.7	209.6	304.2	225.8	360.4	320.8	408.9	309.6	224.6	236.2	422.2
Residential	116.2	131.3	256.7	180.9	253.9	235.4	229.3	235.9	176.8	191.9	151.8
Non- residential	64.5	78.4	47.5	44.9	106.5	85.4	179.6	73.8	47.7	44.3	270.3
Completed Buildings											
No. of Dwellings	264	175	166	170	153	153	167	175	176	78	46
Floor Area (thousands of sqm)	52.9	56.5	35.3	37.3	58.7	38.2	59.9	52.0	51.7	45.1	28.1
Residential	33.6	36.7	17.5	19.0	22.5	16.8	21.4	26.4	27.0	22.3	12.6
Non- residential	19.3	19.8	17.8	18.4	36.2	21.4	38.5	25.6	24.7	22.9	15.6

Source: Department of National Planning

8 As a result of rising material and oil prices, the estimated cost per house went up from an initial contract value of US\$ 19500 in 2005 to more than US\$30,000 by 2007.

9 By end of 2008, housing repair was almost complete, while more than half of housing reconstruction was complete (DNP, 2009).

Box 2

Hulhumale' Development project

The Hulhumale' development project was envisaged by the government to alleviate the acute housing congestion problem in the capital region Male' and to facilitate the continued growth of the key sectors of the economy. Hulhumale' is a reclaimed island located 3 kilometers from the capital Male' and 1 kilometer from the international airport and comprises of 188 hectares of reclaimed land. The reclamation of Hulhumale' began in 1997 and was completed in 2002. It has an estimated population of 60,000 people and the target completion of the entire project is 2020.

With the completion of primary developments, which includes 280 residential units, 48 commercial units, major road network and main social and utility infrastructure, the first inhabitants settled in Hulhumale' in the middle of 2004 with a resident population of just over 1,000 people (see Table 1 for detailed information on developments in Hulhumale' since 2004).

The Housing Development Corporation, which was initially incorporated in 2005 as the Hulhumale' Development Corporation Ltd. (HDC), is the legal entity taking responsibility for the successful implementation and delivery of the development of Hulhumale'. The role of HDC also includes the builder to construct the necessary infrastructure to meet the required conditions for living in the island and for development of the businesses.

Housing developments in Hulhumale' is delivered through a mix of low income housing and middle to upmarket developments. HDC directly develops housing units targeted for lower income population groups which are sold at cost with no profit margin. Middle to upmarket developments are delivered through sale of individual plots of land for private housing development, and sale of bigger plots of land to corporate clients for major real estate projects such as condominiums and mixed use residential flat blocks.

Box 2 (continued)

Table 1: Developments in Hulhumale' during 2004-2013

Phase	Facilities and Developments	Funding	Type of Investment
2004			
Residential	Development of Neighborhood 1, 280 Standard Apartment Units of 2, 3 and 4 bedroom units	Thai Exim Loan	Residential
	Sale of 222 Residential Land Plots		Residential
Commercial and Industrial	Allocation of 54 Industrial Plots	Thai Exim Loan	Industrial
	4 Commercial Buildings with a total of 48 units		Commercial
Facilities and Infrastructure	Integrated Primary and Secondary School of 20 Classrooms (Laale' School)	Thai Exim Loan	Institutional
	50 Bed Hospital	Thai Exim Loan	Institutional
	Mosque of a Capacity of 1500	Thai Exim Loan	Institutional
	Major Arterial Roads, Basic Infrastructure and Utilities, Landscaping, Etc.	Thai Exim Loan	Road Development
2006			
Residential	120 One Bedroom Apartments : Hulhumale' Basic Flats	Equity financing	Residential
	64 Row Houses : Hulhumale Row Houses	Equity financing	Residential
	Sale of 254 Residential Land Plots	Loan Financing	Residential
	Development of 504 Social Housing Units		
Facilities and Infrastructure	Award Construction of 232 Condominium Units	Developer financing	Residential
	Construction of a Secondary School (Ghazee School)		Institutional
	Roads, Infrastructure and Landscaping of N2		Road Development
2008			
Residential	Award Construction of 6 Apartment Complex Plots	Developer Financing	Residential
Commercial and Industrial	Allocation of 62 Industrial Plots	Equity Financing	Industrial
	Development of 58 Commercial Units		Commercial

Box 2 (continued)

2010			
Residential	Middle to High Income / Coral Ville Housing Project (183 Apartments, all Sold)	Developer financing	Residential
	Middle to High Income/Row House Project (12 Developed all sold)	Equity financing	Residential
Commercial and Industrial	Sale of 10 Garage Units	Equity Financing	Commercial
2012			
Residential	Sale of 150 Residential Plots		
	Development of 15 Row Houses	Equity Financing	Residential
	Development of 1000 Housing Units in N3	Chinese Exim Bank Loan	Residential
	Development of Additional 15 Row Houses	Equity Financing	Residential
	Development of 10 Commercial Units	Equity Financing	Commercial
	Development of Hulhumale Mini Mall	Equity Financing	Commercial
Facilities and Infrastructure	Neighborhood 3 Road Development	Equity Financing	Road Development Costal
	Hulhumale Sheet Piling Project	Equity Financing	Development
	Hulhumale' Neighbourhood 3 Grade 1-12 School Project 2013	Equity Financing	Institutional Development

Source: Housing Development Corporation

Box 3

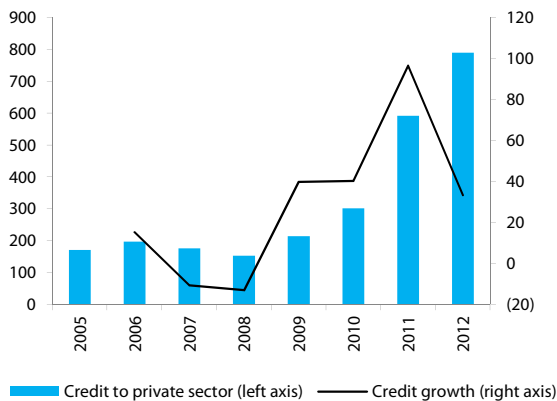
Housing Development Finance Corporation

Housing Development Finance Corporation (HDFC) is the only institution specialised in providing housing finance in the Maldives. The company was established during 2004 as a state owned enterprise with the purpose of providing financing for housing with terms more favourable than commercial banks.

During the initial years, HDFC had limited capacity to cater for increasing need for the financing, due to limited financial resources available to them. Hence, with the entire equity of the company being given out as loans to households within the years 2005–2006, the company was no longer able to provide further loans after this period. However, following its privatisation in July 2008 (government share was reduced to 49% and the remaining 51% was jointly held by International Finance Corporation, Asian Development Bank (ADB) and HDFC Investments Ltd. India) and with new lines of long terms credit, the HDFC re-entered the market for mortgage loans for individuals and families during February 2009. With these changes, HDFC offers both developer and end user financing with efforts made to enable the poor and disadvantaged to have access to the facilities offered. Reflecting the strengthening of its financial capacity, the HDFC’s loan portfolio has witnessed a substantial growth since 2009 and amounted to MVR789.7 million at the end of 2012. This compares with MVR214.8 million in 2009 and reflects an average loan portfolio growth of 52% during the period (Figure 2).

Figure 2: Credit Extended to the Private Sector by HDFC, 2005–2012

(in millions of rufiyaa, growth in annual percentage change)



Source: Housing Development Finance Corporation

3.2 Non-residential buildings

This includes investment in non-residential buildings by both the public and the private sector. The bulk of non-residential projects are public sector projects for the development of social infrastructure such as health facilities, schools, offices and mosques funded by the public sector investment programme (PSIP). This area of infrastructure development has witnessed a sharp growth between 2006 and 2008 reflecting reconstruction of schools and facilities in the islands that was damaged or destroyed by the 2004 tsunami (Tables 3 and 4). Health facilities on 40 islands were damaged or destroyed by the tsunami. Schools and other educational infrastructure totaling US\$15 million were damaged or destroyed by the tsunami (DNP, 2009). However, activity in the non-residential building construction has registered a significant decline since 2009, mainly due to the completion of most tsunami-related projects and the scaling down of public infrastructure projects owing to budget constraints.

Table 3: Value of Public Sector Infrastructure Projects Awarded by Sector, 2000–2012

(millions of rufiyaa)

	2000	2001	2002	2003	2004*	2005	2006	2007	2008	2009	2010	2011	2012
Education	26.9	30.5	7.9	13.9	n.a.	14.5	107.0	186.9	152.0	26.2	76.5	65.7	-
Harbour/ seawall	-	8.6	-	9.4	n.a.	22.3	15.2	349.6	462.0	270.7	105.0	177.9	224.9
Dredging/ reclamation	-	-	-	-	n.a.	-	29.1	-	-	-	-	27.4	-
Mosque	1.7	9.1	10.2	21.6	n.a.	11.4	20.0	145.3	30.3	-	10.6	43.8	4.7
Health	-	-	15.0	8.0	n.a.	6.0	52.2	161.9	44.6	-	1.6	-	9.2
Housing	-	-	22.0	10.0	n.a.	360.7	29.4	469.9	822.4	80.0	92.1	24.2	-
Airport	0.5	0.4	0.7	-	n.a.	-	84.6	-	-	-	-	-	-

Source: Ministry of Finance and Treasury

*Data for 2004 was not available

Table 4: Number of Public Sector Infrastructure Projects Awarded by Sector, 2000–2012

	2000	2001	2002	2003	2004*	2005	2006	2007	2008	2009	2010	2011	2012
Education	26	8	4	5	n.a.	3	45	30	12	5	9	8	-
Harbour/ seawall	-	1	-	2	n.a.	2	2	11	8	3	1	13	6
Dredging/ reclamation	-	-	-	-	n.a.	-	1	-	-	-	-	1	-
Mosque	2	3	3	8	n.a.	2	3	38	4	-	7	7	1
Health	-	-	6	3	n.a.	5	28	22	11	-	1	-	1
Housing	-	-	3	1	n.a.	18	5	7	3	2	1	1	-
Airport	1	1	1	-	n.a.	-	2	-	-	-	-	-	-

Source: Ministry of Finance and Treasury

*Data for 2004 was not available

3.3 Civil Engineering

The civil engineering subsector mostly include public investment in transport infrastructure such as harbour/seawall, dredging/reclamation, airports, ports and utilities infrastructure. Given the dispersed nature of the islands in the Maldives, the most feasible means of access between islands for commerce and other social activities are provided by harbours. Therefore, most investments in the civil engineering subsector are transport infrastructure projects for the development of harbour or seawall and dredging for passage deepening. Although majority of projects in the civil engineering subsector are projects under the PSIP, some of the transport infrastructure projects that were undertaken in the country during 2010–2011 also include the development of airports under the Public Private Partnership initiated in 2009.

Developments in the civil engineering subsector

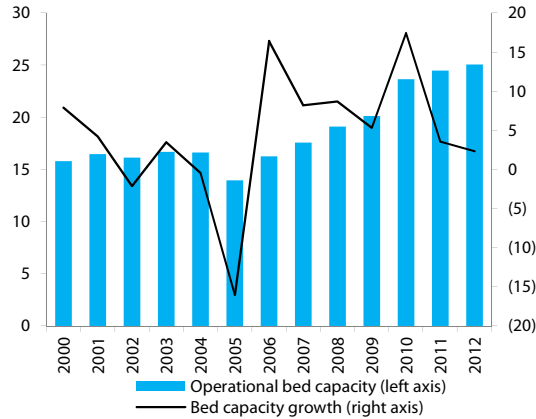
Activity in the civil engineering subsector witnessed a significant expansion between 2005–2008 driven by the reconstruction of harbours that were destroyed or seriously damaged by the 2004 tsunami. For example, harbours and jetties in a total of 104 islands required reconstruction, of which only around 38% were completed by 2008 (DNP, 2009). Harbour projects are rather expensive and the slow progress in harbour reconstruction mainly reflects difficulty in securing funding for these projects and the rising cost of construction.

Followed by period of rapid growth, activity in civil engineering subsector contracted sharply in 2009 due to the scaling down or halting of major PSIP projects due to fiscal austerity on the back of domestic economic downturn. As can be seen from Table 3 and 4, both the number and value of public projects awarded in 2009 fell markedly and remain subdued until it recovered in 2011. It again declined in 2012 due to funding constraints faced by the government.

3.4 Resort construction

The resort construction projects, which includes the construction of new resorts and the repair and reconstruction of existing resorts, has been an important driver of construction sector growth since the inception of the tourism industry in 1972. The tourism sector, which is the single most important sector of the economy, witnessed a rapid increase in tourist arrivals over the years. This has resulted in a substantial expansion in the

Figure 3: Operational Bed Capacity of Tourism Sector, 2000–2012
(in thousands, annual percentage change)



Source: Ministry of Tourism, Arts and Culture

number of tourist accommodation facilities in the country. For example, in line with the increase in tourist arrivals, the total registered bed capacity of industry grew at an annual average rate of 5% (2000–2012) providing a major boost to construction sector growth (see Figure 3 for the growth in operational bed capacity of the tourism sector). Meanwhile, with the developers’ focus concentrated on high-end tourist resorts, the value, scope and nature of the tourism related construction projects have also seen a tremendous increase in recent years.

Developments in the resort construction sector

Looking at developments since 2004, the demand for resort construction has witnessed a strong growth reflecting the leasing of several new islands for resort developments by the government during 2004–2011. Overall, these new leases have allowed for an additional bed capacity of 8,441. Despite these developments, the resort construction market, which relies extensively on external funding, registered a major setback in 2009 due to the GFC and the decline in tourism revenue. Since then, activity in the resort construction segment has remained weak, mainly reflecting the funding difficulties faced by resort developers, particularly after the GFC. As such, a number of the leased properties continue to be underdeveloped or are considerably behind the construction schedule. By the end of 2012, there were about 72 islands at different stages of development, while some of the developments have been completely put on halt due to lack of financing availability (Ministry of Tourism, Arts and Culture, 2009). While noting that most resort

development projects are foreign investments, financed mostly through borrowing from offshore banks, attracting foreign investment to the tourism sector has recently become more challenging, due to the low levels of investor confidence amid the deteriorating macro environment.

4. Problems and challenges

4.1 Access to finance

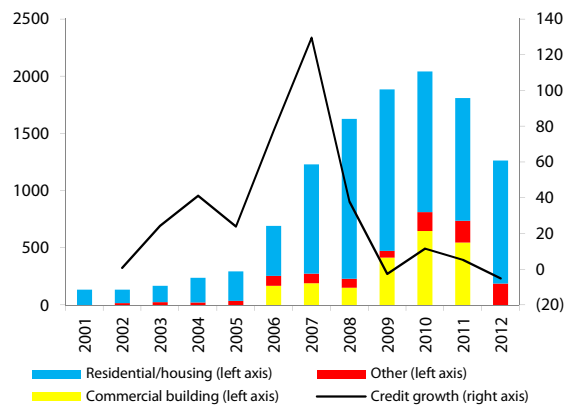
Construction companies generally require a large amount of working capital since expenditure on materials and other operational costs account for the bulk of the total project value. Moreover, most public works projects involves heavy transaction costs, which include the various payments associated with the bidding process, including the bid security to be paid at the pre-proposal stage; the 90 days bid security performance guarantee; and a 15% advance payment obtained at the post-bid stage. Given that banks in general consider lending to construction as high risk, due to the high levels of uncertainty associated with construction projects and also due to the relatively small size of contractors which have limited fixed assets/capital, access to finance is often a major constrain for the growth, operation and expansion of construction companies. Hence, as a result of the limited financing options available, most construction firms have to rely on cash flow and trade credit to finance its operations.

Bank credit to construction

Although internal funds are the main source of financing for working capital requirements for local construction companies, bank credit is also an important source of finance for raising project finance and working capital. Bank credit facilities most commonly used by the construction firms include letters of credit, bank overdraft facilities, bank guarantees (such as for bid security, performance guarantees and advance guarantees) and loans. Looking at trends in bank credit, following a period of rapid growth, bank credit to the construction and real estate sectors, which accounted for 6% of GDP and 12% of overall bank credit, declined markedly in 2007 and has remained sluggish since then (Figure 4). This reflected the overall stagnation in credit to the private sector by domestic commercial banks after the GFC. Meanwhile, the bulk of domestic bank credit to construction related projects (which excludes credit to tourism development projects), is lent to residential or housing projects followed by commercial building projects.

Figure 4: Bank Credit to Construction and Real Estate Sectors, 2001–2012

(in thousands, annual percentage change)



Source: Maldives Monetary Authority

Issues in bank credit

The barriers faced by construction firms with respect to access to finance from the banks include high interest rates of borrowing from the domestic banking sector (averaging 11%–13%) compared to borrowing from foreign banks (LIBOR +5%), the higher collateral requirements and the shorter maturity (5–7 years). For example, in the case of new borrowers, banks require 100% in cash as margin or 180% if collateral is used as a security, while in the case of existing customers it requires 25%. This constrains the ability of construction firms to borrow and is also a major constraint on the growth of the relatively smaller firms tendering for public sector projects.

From the bankers' point of view, several factors affect the credit delivery to the construction sector, which includes the high level of uncertainty involved when lending to construction sector. Project delays and cost overruns are common problems in the construction industry which increases credit risk. According to the banks, construction projects sometimes get delayed due to the lack of proper planning and risk management by the construction companies, which interrupt the smooth flow of cash, thus increasing credit risk to banks. In some cases, delayed payment to the contractor also harms the cash flow of the contractors. Banks also cites failures in following the required procedures, when applying for credit, as constraints to credit delivery. Since most contractors lack

collateral, the absence of credit ratings makes it difficult for banks to assess the credit worthiness of the contractors. In addition, inaccurate valuation of property (where property is valued at a much lower price) and the weak judiciary or legal framework which delays loan recovery efforts were also among the factors cited as barriers to credit delivery. In addition, some banks also cited prudential regulations on lending limits (on single client and his/her related parties) and the high minimum reserve requirement as constraints on credit delivery.

Payment delay to contractors

Another major issue which is also related to access to finance is payment delay to contractors. Unlike other businesses, contractors usually have to wait for some time (usually 30–90 days) to receive payment for work done and it is not uncommon for contractors to receive payments beyond the date specified in the contract. Prolonged delay in payments creates serious problems for contractors and harms the cash flow of contractors. This increases the additional need for borrowing to finance labour and materials. In the Maldives, one of the major problems faced by the construction sector has been delays in payments for contractors' invoices, particularly by the government. This has in part been contributed by the lack of a legally enforceable measure in the contracts for compensation to contractors for payment delays.

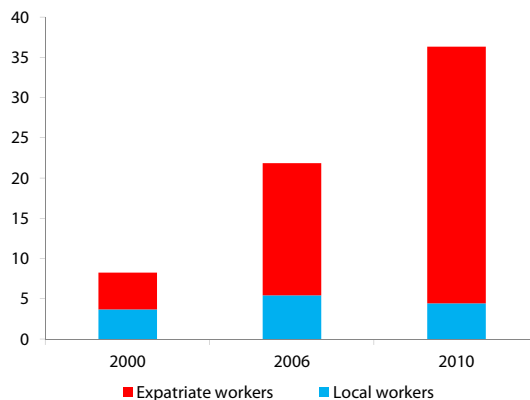
4.2 Labour shortages

The construction sector of Maldives is dominated by a large and growing expatriate labour force. The number of expatriate workers in the construction sector has witnessed an exponential increase from 2006 to 2010, while the number of locals declined during the period (see Figure 5). Although expatriate workers provide the employment required by contractors at a cheaper price, the significant dependence of the construction sector on expatriate labour has resulted in large economic leakages. Each year a large amount of foreign currency continues to be remitted by expatriate workers, which has added to the foreign exchange shortages faced by the economy. According to the balance of payments statistics the average amount of foreign currency remitted outwards in 2012 was US\$259.3 million, which is an increase of 20% compared to the US\$216.5 million remitted in 2011.

Reasons for the growing expatriate workforce

Based on the interviews held by the MMA with a number of construction companies, it was found that around 80% of their workforce is expatriate workers, mostly employed in the unskilled category. The main reason for the high number of expatriate workers as highlighted by the companies include a) the preference for expatriates due to the attitude and work culture of locals—high level of absenteeism, turnover; b) the low cost of hiring expatriates—according to some contractors wages paid to locals are 20% to 50% higher than their expatriate counterparts; c) unavailability of locals due to lack of interest; and d) shortages in skills and education required by the industry. In addition, some locals appears to be reluctant to work in certain jobs, due to a preference for white collar jobs over blue collar jobs. This partly reflects the society’s perceptions on such occupations as it is considered low prestige. Another reason for the reluctance of locals to work in the construction sector includes low wages, particularly for the more elementary level occupations (although locals are paid higher than expatriates), and poor working conditions. There is also no minimum wage in the Maldives and contractors can easily obtain expatriate labour at a relatively low cost from the large labour markets of the

Figure 5 : Local and Expatriate Employment in the Construction Industry, 2000, 2006 and 2010
(thousands of workers)



Source: Household Income and Expenditure Survey 2009/2010, Statistical Yearbook of the Maldives 2007 and 2011, 25 Years of Statistics Maldives

neighbouring countries.¹⁰ For example, 94% of expatriate workers in the construction sector are sourced from South Asian countries, such as Bangladesh and India, where the cost of living is much lower than the Maldives.

Shortages in skilled labour

In addition to the shortage of unskilled labour, there also appears to be a serious shortage of crafts level skilled labour (such as masons, barbenders and carpenters) in the industry. This is despite the high level of youth unemployment (according to HIES 2009-2010, 28% in 2010) prevalent in the country and the large number of school leavers entering the labour market each year. The main reason for this is the poor mismatch between the skills of school leavers and those required by enterprises, as for a long time, the educational system of the Maldives was more academic oriented and less focused on vocational training that are demanded by businesses.

While it is relatively easy for the construction companies to hire unskilled workers from abroad at a lower cost, obtaining skilled workers from abroad appears to have become more difficult and costly for contractors. In recent years, contractors have also found it difficult to obtain skilled craftsman from India, the main traditional source of skilled or crafts level labour for the industry, mainly due to the increase in rural income levels in India. This has forced some contractors to source skilled workers from South East Asian countries, particularly from Indonesia, where wage levels are relatively much higher than Maldives. Since shortage in skilled labour is associated with delays, inefficiencies, increase in costs and lost business, training locals in the skills and education required by construction sector would be crucial to increase the productivity of industry and maintain its competitive position. By training locals, it does not only benefit the contractors, but also the wider economy, through the provision of employment to locals and reduction in foreign exchange outflows.

Training and education

Recognising the need to attract more Maldivians to jobs in the construction sector, the government has been collaborating with MACI on a cost sharing basis, to train

¹⁰ A quota system applies for recruitment of expatriates in the Maldives. Any employer wishing to recruit a foreign worker can apply for a quota, but before that the employer should follow certain procedures and justify that a local worker, with required qualifications and experience, is not available for the job. A work permit for expatriate is only granted after obtaining the quota issued by the Ministry of Human Resources, Youth and Sports which is mandated with the issuing of quotas to foreign workers.

Maldivians in the skills required by the industry. One such programme is the Construction Industry Training Initiative formed in 2008, aimed at providing Employer Based Training. In addition, the Maldives Polytechnic¹¹ provides both intermediate and higher level technical and vocational education related to the building industry. Between 2006 and 2010 a total of 1,057 people were trained in construction related skills under the Technical and Vocational Educational Training programme implemented by the Ministry of Human Resources, Youth and Sports with assistance from ADB in 2006. A new initiative, “Skills Training Programme”, has also been launched in 2011. This aims to train an additional 2,290 persons in construction related skills, through apprenticeships and institution based training.

However, these training initiatives, so far have not been able to produce a sufficient amount of trained people demanded by the construction sector. This is indicated by the growing number of expatriates being employed in the construction and also the decline in number of locals employed in the sector. This highlights that additional effort would be needed to attract Maldivian youth for employment in the construction sector. In addition, effort would be needed to make the industry more appealing to the public, as generally, like in many other countries, construction related work are perceived as “difficult dirty or dangerous”.

Unregistered migrant workers

A growing labour related issue faced by the construction industry has been the increasing number of unregistered migrant workers engaged in the construction sector of the Maldives. According to MACI, there are approximately 36,000 unregistered migrant workers (47% of total expatriate workforce) in the construction sector of the Maldives in 2012, of which 70% are unskilled. Most of these unregistered workers undertake construction work at a much lower price and contractors use these workers to reduce their costs and increase profit margins. Hence, this gives contractors using unregistered labour an unfair competitive advantage over contractors using registered workers who face higher administrative and operational costs (such as visa fees and work permit fees). Due to the high levels of self-employment in the construction sector, the activities of unregistered workers in the construction sector are more difficult to monitor and

11 The Maldives Polytechnic was established on 12 April 2010 as the national technical and vocational training centre. The institution has evolved over the years since it was founded in 1975 as Vocational Training Centre.

pose certain health and safety related risks. It is often the case that the work performed by unregistered workers is of poor quality, due to their non-compliance to standards to reduce costs, and also because most of them lack the necessary skills required to perform the job. Although the use of unregistered workers makes reduces the cost of contractors, on the other hand it brings down the wage level and takes away jobs that may otherwise go to skilled locals who are willing and capable in undertaking the job.

4.3 Fluctuations in material prices

Due to the lack of local materials and the limited scope for substitution using local materials,¹² almost all building materials required by the construction industry, such as cement and aggregates; base metals; wood; various fittings and finishing materials, have to be imported¹³. This leads to a huge drain on the country's foreign exchange reserves. For example, during 2004–2012 construction related imports accounted for 12% of the total imports to the country or amounted to US\$131.5 million. Meanwhile, given that expenditure on materials is the major business cost for the contractors operating in the Maldives (around 60% of their operating expenditure), any unexpected increase in material prices, either due to domestic or external factors considerably harms the cash flow of the contractors and slows overall construction.

Escalations in global commodity prices

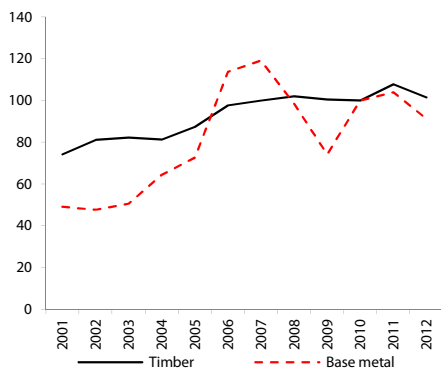
The excessive dependence of the construction sector on imports has made the industry highly vulnerable to fluctuations in global commodity prices, as experienced by the global commodity price boom of 2005–2008. As shown in Figure 8, construction raw material prices more than doubled during 2005–2007, with price of steel and cement having increased by 85% and 34%, respectively. The increase in materials costs led to

12 Historically, the local communities used coconut leaves and various locally available timbers to build houses. During 1970s and 1980s, coral rock mined in Maldives, which is a relatively more expensive building material, became the main aggregate used in local building construction. However, with the government intervening in coral mining (through regulation and awareness) due to its negative implications on fragile reefs of islands, coral mining has been stopped since 1995 and is no longer used in construction.

13 Until 2011 all imported construction materials had been subject to an import tariff (23–25% was levied for all base metals, cement and aggregates) which was an additional burden to contractors. However, with the introduction of a general goods and services tax (GST) in October 2011, the import duties on most construction materials have now been eliminated which would help in reducing the cost of construction.

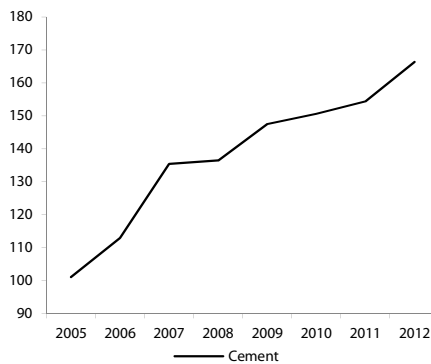
a significant escalation in construction costs during this period. Meanwhile, the impact of these cost increases was further exacerbated due to the absence of a price variation clause in government contracts, which meant that most of the cost increases had to be borne by the contractors.

Figure 6: Global Timber and Base Metal Prices, 2001-2012
(index, 2010=100)



Source: World bank data and statistics

Figure 7: Cement Prices (Grey) India, 2005-2012
(index, 2004-05=100)



Source: Office of the Economic Advisor, Government of India

Shortages in raw materials

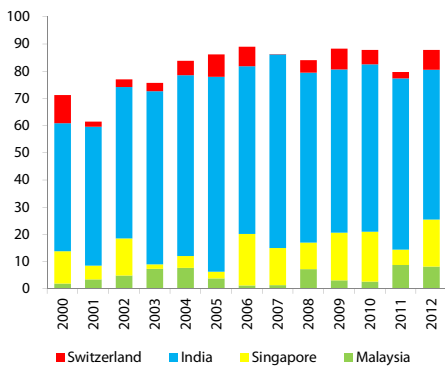
From time to time, the Maldivian construction sector continues to experience shortage in key materials, such as aggregates and river sand, mainly owing to the sector’s reliance on a single source for the import of these two commodities. For example, during 2007–2011 around 96% of construction aggregates to Maldives were imported from India. This leads to unexpected increase in prices, causes construction delays and cost overruns. Although most construction materials are still sourced from traditional supply routes, in recent years there has been a gradual shift to non-traditional supply routes (see Figures 8,9,10). The shift to alternative supply routes would be important to minimise the adverse impact of certain limitations in traditional supply routes.

Foreign exchange constraints

Timely availability of foreign exchange for the import of materials is important to complete the projects on time and within the required budget. Since 2009, suppliers of construction materials and the contractors which directly import their material

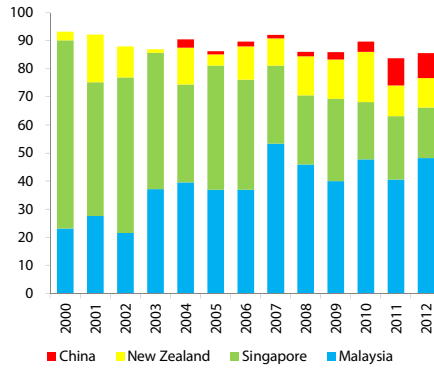
requirements¹⁴ have faced severe constraints in obtaining the required amount of foreign exchange from the formal banking sector. As result, a considerable amount of foreign exchange has to be obtained from the parallel market at a higher price. This has created an additional burden to construction firms, particularly at a time when construction costs have been increasing and margins have been falling.

Figure 8: Major Source of Cement and Aggregates Imports to Maldives, 2000-2012 (as a percentage of total)



Source: Maldives Customs Service

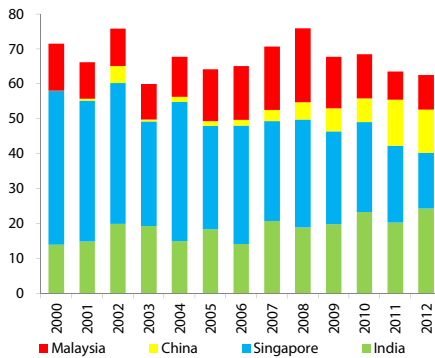
Figure 9: Major Source of Wood and Articles of Wood Imports to Maldives, 2000-2012 (as a percentage of total)



Source: Maldives Customs Service

Figure 10: Major Source of Base Metal Imports to Maldives, 2000-2012

(as a percentage of total)



Source: Maldives Customs Service

14 While some construction companies procure building materials from local suppliers, the larger construction companies directly imports on average around 45% of their material requirements.

Changes in exchange rate and tax policies

Unexpected changes in the exchange rate and tax policies, such as the 20% devaluation of the rufiyaa in 2011 and the introduction of business profit tax and the general goods and services tax in the same year (at rates of 15% and 3.5%,¹⁵ respectively), had also contributed to an escalation in costs, leading to huge losses to contractors. This was because most of these cost increases had to be borne by the contractors as there was no compensation clause for cost escalations in the public contracts. Meanwhile, the absence of a construction price index made it difficult for contractors in making necessary adjustment for escalations in costs.

4.4 Other issues

Weaknesses in the legal and regulatory framework

Weaknesses in the national legal system, and the absence of a proper regulatory framework to govern construction related activity in the Maldives, have made it difficult to monitor or regulate the construction industry properly. At present, the industry is governed by a set of regulations which is not bound by a Building Act. Moreover, these regulations were created on an ad hoc basis and are administered by several institutions. A building code was implemented in 2010 although it also lacks legislative backing. At the same time, the existing regulations also do not also seem to be adequate. For example, at present, there are no regulations to ensure the occupational health and safety of workers around the construction sites. Similarly, there is also no authority to oversee elevator safety in the country and therefore the elevator contractors, elevator mechanics or elevators inspectors are not required to be licensed. Insufficient coordination between different authorities, combined with weak control and enforcement of the existing regulations, have contributed to increasing concern about work-related health and safety issues and the quality of buildings being poor.

Competition by foreign firms

Competition from foreign firms is also a concern of local construction companies. The rapid growth of the industry, and the increase in the size and scale of available projects in recent years has resulted in a rise in the number of foreign companies entering the local construction market. The foreign contractors usually undertake the large and complex

¹⁵ Introduced in October 2011 and this was raised to 6% beginning January 2012.

civil engineering projects, as very few local contractors have the capacity to undertake these projects. However, more and more residential and resort construction projects, which were traditionally undertaken by local companies, have been awarded to foreign companies, either as joint ventures or as entire foreign investments. Competition by foreign firms, through joint ventures, offers the scope for technology transfer, and the development of local construction firms and upgrading of the industry. Nonetheless, the increasing involvement of foreign firms in the residential and resort construction segment have adversely affected the local contractors through a reduction in prices and taking away the work from locals who are capable. This is because foreign competitors have better access to capital and other resources which gives them a competitive advantage in bidding for certain projects. At present, there is also a lack of an adequate legal framework regarding the foreign contractors operating in the Maldivian construction. The existing guidelines on licensing of foreign investors states that a project value of less than US\$5 million can be awarded to a foreign company as a joint venture, with the condition that 35% of shares should be held by a local company or individual, while an amount higher can be awarded as an entire foreign investment.

5. Concluding Remarks

The construction sector of Maldives underwent a rapid period of growth between 2004 and 2008, driven by the Hulhumale' development project, the massive reconstruction efforts following the 2004 tsunami and an increase in resort construction activities. However, with the end of the tsunami reconstruction boom and reflecting the adverse impact of the GFC, activity in the construction sector has become weak and rather volatile. While most of the problems and challenges faced by the construction sector reflect the dynamic changes taking place in the business environment, particularly after the GFC and the ensuing domestic downturn, some of these problems also relate to various capacity constraints facing the sector. More specifically, the main problems facing the sector include the scaling back of government infrastructure spending; escalation in construction costs due to price fluctuations and material shortages; difficulties in access to finance; shortages in skilled labour; constraints in foreign exchange and also payments delays. Moreover, apart from the industry specific issues, broader problems relating to the macroeconomic and regulatory environment also seem further lowered investor confidence, thereby hindering the ability to attract foreign finance for the construction projects.

Shortages in skilled labour continue to be key challenge faced by the construction sector. The problem of labour shortages and the resulting increase in the expatriate employment also have an undesirable impact on the country's limited foreign exchange reserves through large remittance outflows. Meanwhile, given that the construction industry is now faced with greater uncertainty and more risk, there appear to be the scope to improve the skills of local construction managers. This further emphasises the need for continued investment in developing management skills and other technical skills required by the industry.

There are also certain issues in the public contracts, such as the lack of a price variation clause or a compensation clause, which constrain the operation of local construction companies and the overall growth of the construction sector. Hence, adopting fair and equitable terms in contracts, in order to minimise the risks associated with price fluctuations and payment delays, would provide benefits to both the parties. Moreover, measures to improve the timely payment to contractors would help to smooth the cash flow of contractors and thus alleviate their borrowing needs. This in turn would reduce banks' perception of risk and improve overall access to bank finance.

Finally, strengthening the regulatory environment through the enactment of the Building Act; updating and revising existing regulations related to the sector; and strengthening compliance would be crucial for the sustainable growth of the sector. Given the critical challenges facing the construction sector of the Maldives and due to its important contribution to the economy, both as a provider of infrastructure for national development and its potential to create jobs and stimulating other business activities, new strategies are needed to ensure the sustainable development of the construction sector and make the sector play its role in the economy effectively.

Looking ahead, the long term prospects for the Maldivian construction sector will largely depend on the ability of resort developers and the government to secure finance for ongoing and planned projects and in addressing the various problems and challenges being faced by the construction sector in a timely and cohesive manner.

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