Table 4.30 The Middle Eastern MODU Market Forecast 2012-2022 ($bn, AGR %)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
$bn	**1.6**	**1.6**	**1.7**	**1.8**	**1.9**	**2.0**	**2.0**	**2.1**	**2.1**	**2.2**	**2.3**	**2.3**
AGR(%)		2.0	4.0	6.0	4.3	4.0	3.0	3.2	2.5	3.1	3.4	3.1

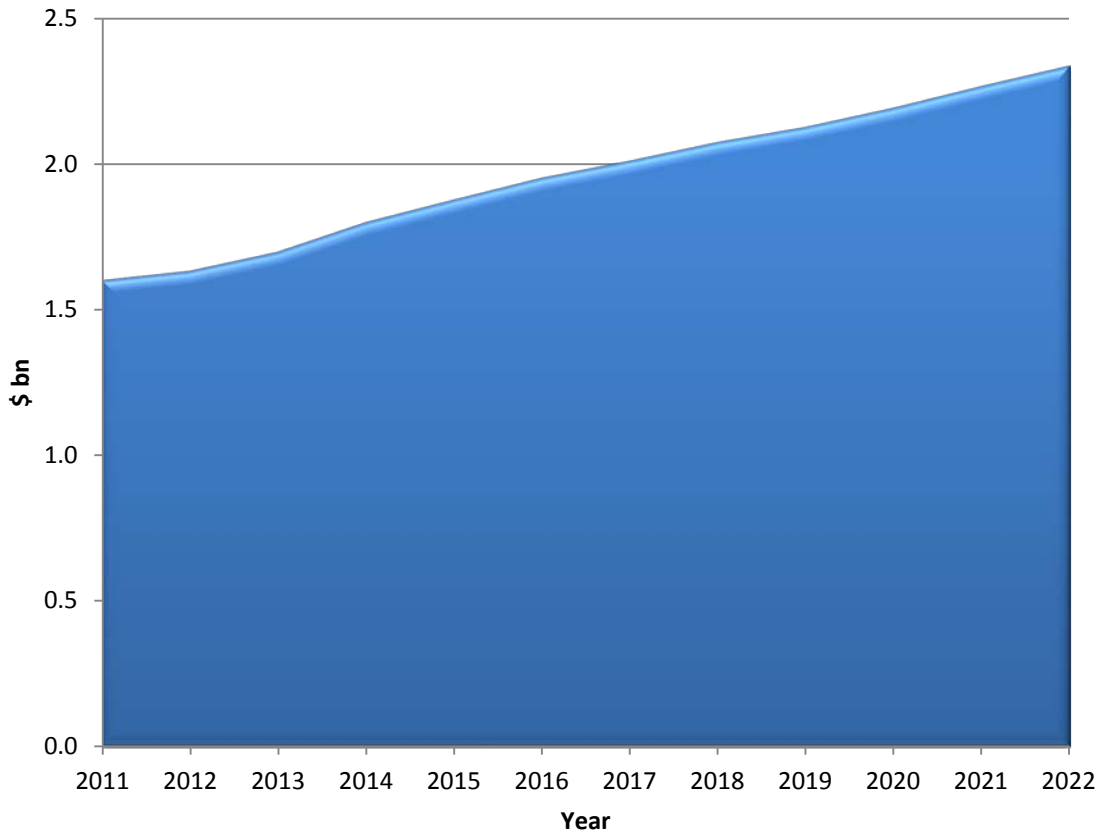
Source: *Visiongain 2012*

Table 4.31 The Middle Eastern MODU Market Forecast CAGR (%) 2012-2022, 2012-2017, and 2017-2022

	2012-2022	2012-2017	2017-2022
CAGR (%)	**3.7**	**4.3**	**3.1**

Source: *Visiongain 2012*

Figure 4.45 The Middle Eastern MODU Market Forecast 2012-2022 ($bn)



Source: *Visiongain 2012*

delivered in the next two years creating a marked increase in worldwide jackup rig fleet and a reduction in demand for further new-builds.

Alternatively, we expect to see an increase in demand for semisubmersibles and drill-ships in the coming years. With oil prices hovering around $100/bbl, it becomes affordable for operators to pay the higher day rates these rig types charge to drill in deeper waters. Deepwater regions of the world hold substantial oil and gas fields but are costly to drill and therefore remain greatly unexplored. New technologies and higher oil prices have combined to make the next few years a potential boom market for deepwater drilling.

6.1.2 Costs of MODUs

Visiongain: What are the major differences between semisubmersibles, drill-ships and jackups? How do they differ in terms of costs?

Geoff Murphy: Semisubmersibles and drill-ships can work in ultra-deep waters, up to 12,000ft. water depths and can drill up to 40,000ft. Drill-ships often have higher tank storage capacity. This capacity is used for a number of materials, from fuel to water, cement, to drilling mud. In addition, drill-ships have better mobility and can travel at faster speeds. This enables them to avoid hurricanes and storms faster than a semisubmersible. On the other hand, semisubmersibles have better motions when drilling, which results in less down time. Less down time is every drilling contractor's goal. All ultra-deep water drill-ships and semisubmersibles use dynamic position (DP) thrusters for stabilization and mobilization. Shallow water semisubmersibles may use a mooring system which more or less anchors the vessel the ocean floor. The fuel costs for running DP can reach US$100K a day when oil prices are high. New-build drill-ships can reach staggering costs of up to $900m, while the average cost for new-build semisubmersibles is approximately $600m.

New-build jackups will vary in cost according to their class and working water depths as well as where they are built and the drilling equipment required by the end user. On average, F&G's 300ft (91 metre) water depth jackup can cost anywhere from $145m to $160m to build. One F&G 400ft (122 metre) water depth jackup recently sold for $220m. The cost of the world's largest jackup designs (some reaching 500ft water depth) are so high that they can equal the costs of a small semisubmersible.

6.1.3 Technologies Onboard MODUs

Visiongain: What are the main differences between technologies used onboard that determine the cost of construction?

Floating Storage and Re-gasification Units (FSRU) and numerous other types of vessels. In 2012 Keppel opened a shipbuilding facility in Brazil to be near the rapidly growing offshore oil & gas industry in Brazil. Keppel is among the top five largest producers of MODU body parts. Keppel FELS is the design, construction and repair division of Keppel Offshore & Marine. Keppel FELS has designed around 50% of newly built jackups across the world over the past 10 years. In the first half of 2011, Asia Offshore Drilling Limited exercised its first of two options to build a KFELS B Class jackup rig worth $184m. Keppel has shipyards in various countries for repairs and upgrading.

7.1.9 Lamprell Plc.

Headquartered in the United Arab Emirates, Lamprell is a provider of engineering, refurbishing and upgrading services for jackup rigs and similar offshore equipment. The company has at least 30 years of history and employs 14,000 people across its six facilities. Lamprell also provides offshore engineering services to the renewable industry i.e. offshore wind farms besides serving the onshore and offshore oil and gas industry.

7.1.10 LeTourneau Technologies

LeTourneau Technologies is a wholly owned subsidiary of Joy Global Inc. LeTourneau Technologies is specialised in the design and engineering of offshore and onshore oil and gas drilling rigs. The company also has five other business units which engineer power systems, mining and forestry machines steel and alloy processing and drilling systems.

7.1.11 Samsung Heavy Industries (SHI)

Founded in 1974, Samsung Heavy Industries has its main shipyard on the island of Geoje near the southern coast of South Korea. The company builds different types of oil and gas carriers, floating drilling rigs and drill-ships and numerous other types of offshore structures. By June 2011 the company had built numerous drill-ships, and its ongoing projects in 2012 included fabrication of drill-ships for Delba Group, Etesco Construcoes E Comercio Ltda, and Schahin Engenharia Ltd.

7.1.12 Sembcorp Marine

With 48 years of experience, Sembcorp Marine is based in Singapore but has shipyards in Brazil, India, Indonesia, China and the US. The company is an offshore engineering company with expertise in providing integrated solutions and builds offshore structures such as semisubmersible offshore platforms and FPSOs for the energy industry. In 2010 the company had a net order book worth $4.8bn with completion and delivery until the first half of 2013.