An Analysis on Economic and Geographic Backgrounds of Reclamation in Japan's Port District

Suzuki, Takeshi
National Institute for Land & Infrastructure Management, Yokosuka, Japan

Reclamation has strong impacts on coastal environment systems. Commonly, environmental impacts are assessed on condition that reclamation plans are given. Although impact scales depend on reclamation scales, the economic and geographic backgrounds of reclamation are scarcely analyzed. Hence, properties of reclamation in port districts completed and planned are investigated, for deepening our knowledge of coastal environment systems containing human activities. The analysis on the reclamation completed shows that the area newly reclaimed in a year, which is mainly for industrial real estate, has trended to downward since the first Oil Shock; while the speed of the decrease dropped after FY1984. Next, the increased area of reclamation planned in FY1989-1991 and FY1996-1998 is examined. The distributions of the area of reclamation planned in both periods against the water depths have one or two peaks owing mainly to island type reclamation. And its peaks sift the locations to deep side. The cause and effect analysis on the increased area of reclamation planned and the maximum and minimum water depth at the areas were executed using the path analysis. In the analysis, population is put to main independent valuable, and other independent valuables are treated as residuals against the component correlating with population. As the result of analysis, area of port district has effects on area of land formation, increased area of reclamation and maximum water depth in FY1989-1991, while such trend is not observed in FY1996-1998. Land price has effects to deepen water depth of reclamation in both periods. Sales volume of coastal fishery has effects to increase area of reclamation in FY1989-1991, but to decrease area of land formation in FY1996-1998. Water depth of reclamation is deeper at the enclosed sea than at the open sea in FY1989-1991, but the opposite trend is appeared in FY1996-1998. Effects of population are significant on area of land formation and water depth of reclamation.