

minus inventories to current liabilities;

LEVER : ratio of client's total long-term debt to the total Assets.

ROA : ratio of the audit client's net income to total assets.

NAS : a dummy variable, taking the value of one if the audit firm provides non-audit services to the audit client, and zero otherwise.

BIG4 : a dummy variable taking the value of one if the audit firm is EY, PWC, KPMG, or Deloitte.

TENURE: the number of years the audit client is continuously auditing the audit client.

The dependent variable in the model is the external audit fees charged by the audit firm to perform the external audit and is measured in Kuwaiti Dinar<sup>2</sup>. Consistent with previous related research (e.g., Simunic, 1980; Gist, 1992; Craswell and Francis, 1999; Felix *et al.*, 2001; Whisenant *et al.*, 2003; McMeeking *et al.*, 2007; Zain *et al.*, 2015) the natural log of external audit fees is used as a measure of the dependent variable.

### **Control variables:**

Research examining the external audit fees has typically included a set of control variables representing factors believed to have an impact on the amount of external audit fees. In general, these variables include the size of the audit client, the complexity of the audit client's activities and operations, and the amount of risk associated with the audit client. Audit client size is typically measured using the client's total assets. It is intuitive to expect that when the audit client is a large firm it would need more audit work to be performed and hence will be charged higher amounts of external fees. Such a positive relationship between audit fees and audit client size is documented in much of

the existing related empirical research (e.g., Simunic, 1980; Chan *et al.*, 1993; Craswell and Francis, 1999; DeFond *et al.*, 2000; Gonthier-Besacier and Schatt, 2007; Goodwin-Stewart and Kent, 2006; Hay *et al.*, 2008; Zain *et al.*, 2015). Due to the economies-of-scale effects, however, the relationship between audit fees and audit client size is expected to be non-linear (Gerrard *et al.*, 1994). Hence, the natural log of the audit client's total assets (SIZE) is used in the current study as a measure of audit client size.

As indicated, client complexity is also expected to be influential in determining the amount of external audit fees. That is true because more complex activities and operations would need more audit work to be performed, and consequently more fees to be charged. Much of prior audit fees research (e.g., Francis and Stokes, 1986; Che Ahmad and Houghton, 1996; Carcello *et al.*, 2002; Hay *et al.*, 2008; Zain *et al.*, 2015) report evidence of such a positive relationship between audit fees and audit client's complexity. Consistent with some prior related studies (e.g., Gist, 1992; Davis *et al.*, 1993; Chan *et al.*, 1993), the current study uses the natural log of the number of locations visited by the audit team (LOCAT) as a measure of the complexity of the audit client.

Prior audit fees research (Simunic, 1980; Chan *et al.*, 1993; Firth, 2002; Whisenant *et al.*, 2003) suggests that the amount of external audit fees is significantly influenced by the riskiness of the audited firm. Previous studies have used a number of measures of the riskiness of the audit client. Yet, audit client profitability, liquidity, and debt ratio have been among the most commonly used proxies of audit client risk. Accordingly, the current study uses three measures of audit client risk; the client's return on assets (ROA), client's quick ratio (QUICK), and client's financial leverage ratio (LEVER).

<sup>2</sup> At the time of the study, the exchange rate was: 1 Kuwaiti Dinar = 3.3 US Dollars.