



① $n=5$

双正态总体

$$X \sim N(\mu_1, \sigma_1^2)$$

$$H_1: \mu_1 - \mu_2 \neq m$$

③ $\mu_1 - \mu_2$ $H_0: \mu_1 - \mu_2 = m$

$$1) \sigma_1^2, \sigma_2^2 \neq \sigma_0^2 \quad \left| \frac{(\bar{X} - \bar{Y}) - m}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}} \right| \geq Z_{\frac{\alpha}{2}}$$

$$2) \sigma_1^2 = \sigma_2^2 \neq \sigma_0^2 \quad \left| \frac{(\bar{X} - \bar{Y}) - m}{S_w \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \right| \geq t_{\frac{\alpha}{2}}(n_1 + n_2 - 2)$$

④ σ_1^2/σ_2^2 $H_0: \sigma_1^2/\sigma_2^2 = 1$

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College and university compliance services
Taming a complex compliance landscape

The pressure is mounting

Headline-making scandals involving US colleges and universities have become all too common. Financial impropriety, inaccurate recordkeeping or statistical reporting, student cheating, sexual assaults—such transgressions can throw a campus or an entire system into a flurry of allegations, litigation, and negative media attention. Along with damaging reputation and diverting resources, a scandal can reveal legal and regulatory noncompliance, with associated costs including fines, penalties, and sanctions by the federal government.

Some compliance risks are specific to universities. The federal Higher Education Opportunity Act requires schools to disclose college costs, graduation rates, emergency procedures and other data. The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act sets requirements for reporting crimes, including sexual violence and emergency situations and ties federal aid to disclosure of safety information. Title IX of the Equity in Athletics Disclosure Act prohibits sexual discrimination in all education activities, including intercollegiate athletic programs.

The varied roles and relationships of a university make it imperative to maintain a compliance program that meets effective compliance practices outlined in the Federal Sentencing Guidelines. Universities also must comply with the federal False Claims Act, which establishes financial penalties for submitting fraudulent claims to the government, with possible sanctions including criminal prosecutions. Fourteen false claims cases have been settled between the government and universities in the past five years in areas including misuse of grant funds, conflicts of interest, and health care and student aid fraud.

Many universities participate in academic and clinical trial research, creating requirements related to human and animal subject studies, informed consent, and conflicts of interest. Schools with health science centers and hospital relationships are expected to provide effective oversight of anti-kickback compliance, protected health information protection, and billing and coding.

Education globalization creates another set of risks, including potential violations of the Foreign Corrupt Practices Act and Export Controls. Other issues can arise related to foreign students studying in the US, as well as American students and faculty traveling overseas to study and represent the university.

The many risks facing universities today present a strong case for a proactive compliance program. How effectively is your institution equipped to meet these diverse compliance requirements? Deloitte Advisory can help.

A broad and challenging compliance landscape

Universities may be responsible for compliance with a varied array of laws and regulations, including:

- Health care compliance
- Research compliance
- Grants compliance
- International studies compliance
- Athletic compliance
- Clery Act and Title IX
- Cybersecurity and data privacy
- Foreign Corrupt Practices Act
- Export Controls
- Safety and security of students/faculty in foreign countries
- Stark law and US federal anti-kickback statute
- Billing and coding to government programs and commercial insurers
- HIPAA health privacy rule and protection of protected health information (PHI)
- Relationships with pharmaceutical companies



Deep experience and a steady hand

Deloitte can provide an array of services to help institutions develop a compliance program with a sound organizational structure, requisite resources, appropriate complaint response protocols and reporting arrangements, and proper access to trustees. The areas of assistance that we specialize in include:

- Objective gap analysis to help identify, analyze, and prioritize risks.
- Analysis of existing compliance programs to determine structural efficiency.
- Assessment of compliance with leading practices enumerated in the Federal Sentencing Guidelines.
- Education and training for faculty, staff, administrators, and regents.

Our professionals can also help geographically and functionally dispersed institutions balance the value of maintaining autonomy among campuses and programs with the potential benefits of cross-pollinating compliance practices and governance.

A capable adviser at home and abroad

The mission of universities is to produce knowledgeable, well-rounded graduates ready to compete in the career they choose. In today's environment, however, institutions face an array of ancillary demands that can impede or disrupt efforts to educate.

Deloitte professionals can provide deep insights and extensive capabilities to help establish compliance programs and investigative policies and procedures,

as well as on-the-ground investigative services to help support the work of internal auditors. Our resources include higher education specialists, as well as professionals experienced in working with health care providers, corporate research organizations, and other potential collaborators and supporters.

Increasing student populations and expanding educational offerings are among the vital components that contribute to the success of a university. But growth can also mean new compliance requirements and challenges, especially when venturing across borders. With offices in 150 countries, Deloitte can provide valuable knowledge of practices and issues that can affect a university's global operations and aspirations.

Universities operate under many watchful eyes, from regents and regulators to legislators and media members to parents of students and concerned citizens in the communities where they do business. Facing this scrutiny, the need for schools to be proactive and to self-identify and remediate potential compliance lapses is greater than ever. Deloitte offers a breadth of resources to help schools meet the growing demands for strong governance and accountability, while fulfilling their principle mission—educating students.

Learn more about the ways Deloitte Advisory can help your institution meet today's compliance expectations and challenges.

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