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ATTRACTIVE AUDIT

INVESTIGATING ATTRACTIVENESS AND HEIGHT AS DETERMINANTS FOR AUDITOR FEES AND COMPENSATION IN A SWEDISH SETTING

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Abstract:
The purpose of this study is to investigate if auditors' individual characteristics; attractiveness and height, act as determinants for fee generation and compensation in the audit industry. The study is motivated by the observed institutional shift from a technical logic to business logic in audit industry, which leads to increased importance of personal qualifications such as interpersonal skills for auditors to be successful. Additionally, personal characteristics of individual auditors have not previously been investigated in relation to success using archival data. From the social stratification and social psychology literature, attractiveness and height have been found to be observable and significant indicators of professional success. The relationship between labor market outcomes, height, and attractiveness is channeled through the positive correlation with cognitive and non-cognitive abilities. Using an extensive sample of 121 audit engagement partners for public entities during the period of 2001-2013 in Sweden, we extend the well documented audit fee determinant model first developed by Simunic (1980) to include a rating of facial attractiveness and height. Additionally, we extend the model of implicit determinants for auditor compensation found by Knechel, et al. (2013) to include a rating of facial attractiveness and height. In relation to fees, the results indicate a significant positive relationship between height and fees with an associated increase in fees of 7% for every 10 cm in increased height. Facial attractiveness are found to be insignificant in explaining the level of fees. In relation to compensation, the results indicate a 7% increase in earnings for every 10 cm of increase in height and a 5% increase in earnings for every 10% increase in attractiveness. The results speak in favor of including personal characteristics as determinants when investigating fees and compensation in the audit profession.

Keywords: Auditor, Compensation, Audit fees, Beauty premium, Height premium, Attractiveness, Height

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1 Introduction

Within the audit industry, structural transformations such as the rise of big audit firms, introduction of non-audit services, and increased commercialization have taken place (Beattie, et al., 2001). In the face of extreme competitive pressures, developments in information technology, and rising client expectations, the top firms have re-engineered the audit process to emphasize its 'added-value' qualities (Percy, 1997). Auditors are progressively adopting an advisory role, in addition to the traditional monitoring role. Moreover, accounting firms establish incentive arrangements to drive more sales effort from auditors (Huddart, 2013). There may arise a conflict between independently conducting audit reviews while simultaneously nourishing the client relationship with the aim to generate more revenues, since the monitoring role often requires the auditor to challenge the client on what is right and wrong. Such conflicts have led to independence crisis such as the accounting scandals of Enron and WorldCom. These incidents raised the attention of both legislators and professional auditor associations, who have been reviewing the audit practice to identify improvements.

The auditor independence issue is related to the substance of the profession, where human capital plays a central role in determining product and service quality and clients are at a disadvantage relative to firms in assessing the ability of employees (Levin & Tadelis, 2005). An audit engagement is a complex, interactive, and judgmental process (Beattie, et al., 2004). Especially the auditor[1], the person responsible to present the audit, negotiate the prices, discuss accounting issues, and supervise the audit quality, is required to have a high level of technical knowledge, integrity, and interpersonal skills. Additionally, auditors are also required to master relationship management with clients from their audit firms (McCracken, et al., 2008). The reliance on human capital of this industry and the overall substantial power given to the auditor makes it important to examine an auditor on the individual level. Whether the auditor possess the essential personal qualifications to fulfill these expectations is one key to success in this industry.

There are indications that the requirements in the auditor profession have shifted from a foundation of technical logic towards a business logic (Greenwood & Suddaby, 2006). Auditors have been suggested to recognize their role as salespeople, representing complex bundles of services, and view themselves as relationship managers (de Ruyter & Wetzels, 1999). Moreover, "*the ability to handle the client is a key skill for advancement in the hierarchy and for ultimately becoming partner of an audit firm."* (Grey, 1998) The increasing emphasis on interpersonal skills and revenue generation leads to one question: "*How are technical skills measured and valued relative to selling skills* (Huddart, 2013)*?* "

In light of the industry development, it becomes meaningful to investigate the factors influencing success of auditors in order to further understand the dynamics of the profession. Although extensive research has been done to investigate the pricing and determinants of audit fees (Hay, 2013), as well as the financial incentives and determinants of auditor compensation (Knechel, et al., 2013), personal characteristics of the individual auditor have been largely ignored in archival research. This is especially surprising given the reoccurring emphasis on the importance of the individual auditor both in relation to providing good audit quality and as an actor in the corporate governance structure.

[1] Auditor, Audit engagement partner, Audit partner, Signing auditor, is used interchangeably throughout this study.

The limited acknowledgement of personal characteristics in previous audit-related research is also surprising given the extensive research on personal characteristics' influence on compensation and success in other professional services industries. Prior studies investigating personal characteristics and success have found facial attractiveness[2] and height as easily observable and significant determinants for professional success, with reoccurring wage premiums for being attractive and tall. In professional services industries, facial attractiveness and height have shown positive association with success and have been, for example, positively related to the ability of attracting and retaining clients among lawyers (Biddle & Hamermesh, 1998). Another study indicates that personal characteristics could be related to auditor success due to their finding that unattractive audit seniors are perceived as less likely to advance in their careers and more likely to be terminated early (Anderson, et al., 1994).

This study aims to address this clear gap in previous research, where the purpose of the investigation is to examine the linkage between personal characteristics and auditor success on the individual partner level. Auditor success will be investigated based on two aspects: (1) fee generation to the audit firm and (2) individual compensation to the auditor. These two measures quantify auditors' contribution in two levels: first is the volume of revenue contributing to the firm and second is the incentives received from the firm reflecting his/her value. Both measures relate to the equal sharing part of profit sharing between partners of the audit firm as well as individual performance based compensation.

Given the highly interactive nature of the audit profession, it can be expected that the performance of the individual auditor will affect the level of fees he/she is able to generate for the audit firm. The level of fee will be influenced by his/her performance in negotiations, long-term relationship maintenance, and ability to build trust, to mention a few factors. Previous research shows that these factors, in turn, are expected to be influenced by the individual's personal characteristics on the general labor market. Facial attractiveness and height are, based on previous research and as briefly described above, regarded as suitable representatives to lay the ground for research on personal characteristics' influence on auditor success. Hence, the purpose of this study is to investigate whether facial attractiveness and height are determinants of auditor success, measured through both the ability to generate fees as well as the level of individual compensation.

The study is based on a quantitative method and two data sets. Common for both data sets is that they cover data referable to signing auditors of Swedish public companies listed on the Nasdaq OMX main list during the years 2001-2013. The data consists of each auditor's height and facial attractiveness ratings from a survey. In addition, one data set consists of related audit and other fees generated by this individual to the audit firms. The other data set consists of annual income data for the auditors. Firstly, we investigate the relation between personal characteristics and fee generation. Three types of fee set-ups are investigated: audit fees, other fees, and total fees. Secondly, we investigate the relation between personal characteristics and individual compensation. All models include several explanatory variables that have been proven relevant in previous research. In addition, facial attractiveness and height are added as the explanatory variables of primary experimental interest in this study.

The remainder of the study is structured as follows. First, we review previous research in two broad fields: the audit profession and linkages between physical traits and success. Second, we develop the study's hypotheses based on the findings in previous research. Third, we discuss the data selection,

[2] Facial attractiveness and attractiveness will be used interchangeably in this study.

methodology, and development of the two models used to carry out the investigation. Fourth, a description of the data and a univariate analysis of the finite sample is provided. Fifth, we discuss the results for each model in relation to the expected results from previous research. Sixth, we conduct additional tests with the same data to deepen the understanding of the results. Seventh, we provide further analysis and discussion of the results in relation to previous literature. Finally, we conclude our findings and the study's contributions to research, along with a discussion of its limitations and suggestions for future research.

2 Theoretical development and previous research

2.1 Characteristics and development of the audit industry

According to Beattie, et al. (2001), structural transformations such as the rise of big audit firms, introduction of non-audit services, and increased commercialization have taken place within audit industry. By 1988, a series of mergers among the major international firms resulted in the Big Five audit firms, which led to increasing concentration within the external audit market. Revenue from non-audit services has also increased dramatically, especially management advisory services. Moreover, commercialization within the accountancy profession has been growing. In the face of extreme competitive pressures, developments in information technology, and rising client expectations, the top firms have re-engineered the audit process to emphasize its 'added-value' qualities (Percy, 1997). Thus, the auditor is progressively adopting an advisory role, in addition to the traditional monitoring role. There are indications of an institutional shift from the technical logic towards a business logic in audit (Greenwood & Suddaby, 2006).

Audit industry, similar to other professional services such as consulting and law, is the industry where human capital plays a central role in determining product quality and clients are at a disadvantage relative to firms in assessing the ability of employees (Levin & Tadelis, 2005). Its common organizational structure is partnership, where peers are in a joint venture sharing the work, rewards, and risk. Unlike a corporation where the principal owns the productive technology operated or controlled by the agent, in a partnership organization, every partner is simultaneously an owner (who shares the net output of the partnership) and an agent (who produces output). Ownership and control do not reside in separate persons; they are diffused among many persons (Huddart & Liang, 2005). Due to the sharing of risk and rewards among partners, it is highly selective as to whom an audit firm take on as partners. Current partners will not wish to admit new members to the partnership unless they are expected to increase the size of the overall profit pool of the firm (Huddart & Liang, 2003). Therefore, the ability to develop and retain revenue sources is a primary factor in determining who is promoted and retained as a partner (Knechel, et al., 2013).

The increased commercialization in audit industry and incentive programs in audit firms that pressure more sales effort lead to auditor independence concerns. The conflict between independently conduct audit review and reliance on client companies to generate more revenues led to independence crisis. Huddart (2013) provides examples of the failure of some large and prestigious audit firms. Arthur R. Wyatt, a senior partner and Managing Director of Accounting Principles of Arthur Andersen, U.S, stated "*The consulting arms were rapidly growing and were gaining higher compensation levels than the audit and tax partners. Those with a facility to sell new work advanced more rapidly. Cross-selling*

of a range of consulting services to audit clients became one of the important criteria in the evaluation of audit partners. Those with the technical skills previously considered so vital to internal firm advancement found themselves with relatively less important roles." Regulators have also commented on this issue *"The lack of regular tendering of audit services and periodic rotation of audit firms has deprived audit of its key ethos: Professional skepticism. We find ourselves in a landscape where a large number of audited companies have effectively become comfortable with their auditor; this is a refutation for the very essence of independence"* (European Commission, 2011, p. 3)

2.2 Overview of an audit engagement

An audit engagement requires an audit firm to undertake a review of a company's operations and conduct detailed audit procedures with a view to preparing an audit report. Normally, audit firm services are classified into "assurance services" and "other services". The purpose of assurance services is to improve the quality of information to external users by improving the reliability or relevance of the information. Assurance services include attest services (audits, examinations, reviews and agreed- upon procedures) and compilation services (preparing financial statements). The primary attest service is the statutory audit. Other services include technology services (system analysis, information management, and system security), management consulting, financial planning (tax planning, complex financial transactions, financial statement analysis, etc.) and international services (cross-border tax planning, international joint ventures, multinational mergers, etc.). In Sweden, organizations are forced by law to purchase a statutory audit. However, the purchase of additional advisory services is optional (Hellman, 2005).

For listed companies, an audit engagement will involve an audit team, headed by the Accounting Engagement Partner (AEP), who is an authorized auditor licensed and monitored by Swedish regulatory authority. The audit of a large listed company involves many people both in the audit firm and in the client company. The audit team must interact with client staff to obtain information and explanations that permit discovery of errors and internal control system deficiencies. These interactions may involve conflicts that lead to discussions, negotiations and bargaining (Hellman, 2006). Although auditor-client interactions take place at several hierarchical levels, client company financial director (FD) is normally the most senior, principal point of contact for senior member of the audit team. The primary auditor-client relationship is between FD and AEP (Beattie, et al., 2001).

The relationship between FD and AEP involves discussion regarding compliance issues and negotiation regarding accounting and fee issues (Beattie, et al., 2001). In fact, accounting negotiation is a normal part of experienced senior audit partner's practice (Gibbins, et al., 2001). Moreover, AEP is responsible for the sale and price negotiations of statutory audit and additional advisory services with FD ((Hellman, 2005) (Hellman, 2006)). Beattie, et al. (2004) develops a grounded theory model of the negotiation process and the factors that influence the nature of the outcome of interactions. The authors conclude "*Audit was found to be a complex, interactive and judgmental process, which requires a high level of technical knowledge, integrity and interpersonal skills from the AEP*." The quality of the primary relationship with FD and the integrity of the AEP are shown to be critical in securing a good (i.e., high quality) interaction outcome. Poor relationships may arise because the FD and AEP do not trust and respect each other and lack goal congruence. Contributory factors to this situation occur where the FD has previously been in a position senior to the AEP in the same audit

firm (which appears to put the AEP at a disadvantage) or where there is a significant age and experience gap between them.

Communication and relationships matter a great deal in the auditor selection process. "*Many firms can provide an audit opinion, but clients want much more than an opinion.* (Behn & Carcello, 1997)*"* Beattie & Fearnley (1995) finds audit team to be one supply-side factor for auditor client alignment. Audit team, instead of audit firm, reflects the quality of working relationships and audit quality (Schroeder, et al., 1986). Hellman (2005) investigates the purchase of audit firm service and finds that *"both the purchases of standardized audit and the subsequent purchases of advisory services are dependent on personal relationships and trust in particular auditing firm employees."* During the tender process for standardized audit, the specific persons that represented audit firm has been one of the decisive selection consideration. Furthermore, the more positive attitude established toward an auditor while receiving standardized audit services, the more likely the client will purchase additional advisory services from the incumbent auditor. The ability to interact with management is therefore an important quality contributing to the sale of additional services.

The large amount of interaction an audit partner has with his/her client is exemplified in the process of financial reporting negotiations as well as the sale of audit firm services. Overall importance of interpersonal skills to success in audit industry are observed from many research discussing the substance of this profession as relationship management. Due to the little variation in the quality of services delivered by audit firms in general (de Ruyter & Wetzels, 1999), promotion of positive feelings of affiliation is important. According to a FD interviewed by Hellman (2006), "*We saw when we made the tender that the audit firms are quite similar – the offers looked almost alike and the prices as well. It's about people. When you work together it's important to have the right, good persons – in the important factories and on the partner level*." Audit partner's overall role, both in the eyes of the partners and CFOs, is to manage the relationship so that it would be considered ''good'' by both parties (McCracken, et al., 2008). In order to keep clients happy, audit firms appear to manage the assignment of partners to engagements based on CFO preferences and remove those partners who are in ''poor'' relationships, irrespective of why the relationship is considered by the CFO to be ''poor''.

2.3 Success through fee generation - Determinants for audit fee generation

Based on the assumption that potential legal liability of an auditee and auditor to financial statement users (shareholders, creditors, etc.) drives the design of external financial reporting systems and that audit markets are competitive, Simunic (1980) identifies a number of significant audit fee determinants: the size of the auditee, the complexity of the auditee's operations, auditing problems associated with certain financial statement components, and auditee financial distress. Most subsequent research examining the determinants of audit fees use these variables as a foundation in testing new determinants such as internal control, corporate governance, client industry differences, audit firm size, office location, and non-audit services. The number of articles covering audit fee is vast and therefore far beyond the scope of this thesis to cover properly. Instead, we made use of two studies, Hay, et al. (2006) and Hay (2013), which evaluate and summarize the large body of relevant studies published from 1977 to 2007. In the following sections we present the most common and influential determinants from these studies with examples from other studies that we have reviewed.

Determinants that are relevant to client companies include company size, complexity, risk, internal control, corporate governance, and industry. Company size indicates the quantity of audit services required and therefore the number of hours worked (Simunic, 1980). It is found to be the most important variable in determining audit fee (e.g. (Firth, 1985); (Pong & Whittington, 1994)). The amount of variation in client companies explained by size is generally in excess of 70 percent (Hay, et al., 2006). Closely related, the complexity of operations also influences hours worked and the level of expertise needed. This is shown by the level of decentralization and diversification of the financial reporting entity (Simunic, 1980). The risk of client companies refers to the accounting problems that might derive from accounting items requiring complex accounting procedures such as valuation, confirmation, observation, and forecast of future events. Two common examples are inventory and receivables (Simunic, 1980). Another risk indicator is the extent to which the auditor may be exposed to loss in the event that a client is not financially viable (Simunic, 1980). In general, the worse the performance of the organization, the more risk to the auditor and the higher the audit fee is expected to be. Common measurements include profitability ratios, liquidity ratios, existence of a loss, and leverage ratios. (Hay, et al., 2006). Internal control of a client company has a complementary relationship with external audit. A company in need of improved financial controls will increase its investment both in accounting systems and better auditing (Hay, 2013). Corporate governance affects audit fees because improved corporate governance implies that the control environment is more effective. Corporate governance is positively related to audit fees due to increased attention to audit quality. Examples of measurements are number of board meetings and audit committee expertise (Hay, 2013). The industry of client company is related to the level of difficulty in performing audit work ((Simunic, 1980); (Turpen, 1990)*;* (Pearson & Trompeter, 1994)). For example, financial institutions and utilities have relatively large assets, but are generally easier to audit than companies with extensive inventory, receivables, or knowledge-based assets. When a dummy variable is used to represent either industry, audit fees are significantly lower than in other industries (Hay, et al., 2006).

Determinants that are relevant to audit firm are size and city effect. Audit firm size, widely regarded as the proxy of audit quality, has shown a positive association between audit pricing in prior studies (e.g. (Pong & Whittington, 1994); (Niemi, 2004); (Hay, 2013)). From an auditor perspective, large firms have reduced incentives to provide audit services of poor quality due to the overall protection of firm reputation (DeAngelo, 1981). Additionally, audit firm locating in a metropolitan center where costs are higher than the rest of the country will charge higher audit fees. A consistent and positive relationship between city effect and audit fee is found by many studies in UK (Hay, 2013).

Determinants that are relevant to auditors are tenure and specialization. Auditor tenure, defined as the time an auditor has stayed with the same client, is another audit fee determinant because of the reduction in audit fee when the client changes its auditor. This phenomenon is often referred to as low-balling − the pricing tactic an audit firm uses to win new business by intentionally offering services at a discount. Pong & Whittington (1994) identifies a persistent tendency that newly-appointed auditors charge less, on average, than incumbent auditors. This is confirmed by Hay (2013), which finds that auditors with a short tenure charge lower fees and those with long tenure charge higher fees. Auditor specialization is deemed a proxy of audit quality and therefore has positive association with audit fee. Wright & Wright (1997) finds that industry experience enhances hypothesis generation in the planning phase, which would be expected to positively impact the effectiveness and efficiency of subsequent audit testing

(information search) and ultimately lead to higher decision performance. Zerni (2012) also finds that both audit partner industry specialization and specialization in large public companies are recognized and valued by financial statement users and/or by corporate insiders, resulting in higher fees within these engagements.

The last audit fee determinant is non-audit service. According to Hay, et al. (2006), there are two streams of views regarding the relationship between audit fees and the existence of non-audit services. On the one hand, it is argued that the provision of non-audit services can lead to lower audit fees because of cross-subsidization of fees or synergies between audit and non-audit services. On the other hand, non-audit services could be associated with higher audit fees because such services may lead to extensive changes in an organization that require additional audit effort, or because clients that buy consulting services may be problematic in general, or because monopoly power and service efficiency in the non-audit services market allow auditors to charge fee premiums. Hay (2013) concludes that non-audit service has a positive and significant association with audit fee. The result does not support the prediction that non-audit services will be associated with fee cutting and does not suggest that there are problems with auditor independence.

2.4 Personal success measure - Determinants for auditor compensation

There are two primary approaches to partner compensation in a partnership: (1) equal-sharing across partners in which each partner is paid based on overall firm performance or (2) performance-based sharing in which each partner is paid based on his own performance (Burrows & Black, 1998). The relative balance of equal-sharing and performance-based compensation is likely to differ across firms. For any given firm, partner profit allocations are likely to depend on attributes of the firm (e.g., overall profits), the partner (e.g., experience), and the partner's client base (e.g., overall clientele size and types of clients). Further, the weights placed on these attributes are likely to vary from firm to firm (Knechel, et al., 2013). Within Swedish Big 4 audit firms, there is a significant variation in partner compensation. However, they are generally close to performance-based sharing (Knechel, et al., 2011).

Based on archival data of Swedish auditor compensation from 2001 to 2008, Knechel, et al. (2013) examines the implicit determinants of audit partner compensation in Big 4 audit firms. Audit partner compensation determinants are identified as overall firm profitability, partnership size, and within-firm heterogeneity in the size of partner clienteles. Also, the size of the personal client portfolio, acquisition of new clients, development of expert knowledge and industry specialization are all positively associated with the level of partner compensation. However, the magnitude of these associations varies considerably across firms. More specifically, the magnitude of positive association between audit partner income and attracting new clients is higher for more senior partners. Furthermore, audit failures, estimated by the occurrences of Type 1[3] and Type 2 reporting errors related to issuing a going concern opinion, are associated with lower compensation.

To our best knowledge, Knechel, et al. (2013) is so far the only audit partner compensation determinant study that is based on Swedish empirical data. The motivation of variables used in

[3] Knechel, et al. (2013) defines an "erroneous" audit report as not issuing a going concern opinion to a client that subsequently goes bankrupt (Type II error) or issuing a going concern report for a client that does not go bankrupt (Type I error).

Knechel, et al. (2013) that are found to be of significant relationship with compensation are introduced as follows.

The revenue generated from an individual auditor's client portfolio is the major component of any compensation model. As partnership organization is mainly formed to share the work, rewards, and risk, only partners who are capable of increasing the size of the overall profit pool of the firm will be selected as new member of the partnership (Huddart & Liang, 2003). Therefore, revenue generated from the partner's client portfolio will be positively associated with partner compensation.

Office size and location is one indicator of auditor compensation due to its strong association with audit fee generation. Partners operating from large offices may disproportionally benefit from economics of scales (e.g., higher staff-to-partner ratios) compared to partners operating from smaller offices (Knechel, et al., 2009). Additionally, large offices possess more collective human capital due to more extensive experience dealing with public companies. Large offices are also located in metropolitan areas with larger pools of auditor candidates, allowing a more selective recruiting process and ability to attract and retain highly talented personnel (Francis & Yu, 2009).

Auditor experience and expertise are qualifications appreciated by clients and therefore associated with auditor success. Industry specialization in particular, is found to be associated with higher audit quality (e.g. (Balsam, et al., 2003)), perceptions of higher financial reporting credibility (e.g. (Gramling & Stone, 2001)), and a fee premium (e.g. (Zerni, 2012)). In the pursuit of partner success, these qualifications differentiate an audit partner from others.

Auditor effort is a measurement of individual audit partner effort under performance based sharing. For a compensation scheme to be effective, an explicit compensation contract should be based as much as possible on the individual's effort level (Holmstrom, 1979). If auditors are to be incentivized for their performance, it should rely on their ability to attract new clients, retain old clients, conducting more efficient work, and making high quality decisions. While work efficiency and decision qualities are hard to observe, Knechel, et al. (2013) measures the attraction of new clients and retention of old clients by the total audited assets that belong to newly acquired clients, old clients, and lost clients.

Length of career horizon affects an auditor's revenue generation ability and therefore the proportion of partnership profit sharing and fixed profit in his/her compensation. Since partnership is the relationship between peers in a joint venture who share the work, rewards, and risk associated with the venture, the allocation of ownership share depends on an auditor's ability of revenue generation and subsequent increase of the overall profit pool. While partners who have joined the industry for longer period are more capable of generating more revenue for a firm, junior partners may need more time to attract new clients and fees at a level desired by the firm. Hence, junior partners usually hold fewer ownership units and receive a relatively fixed profit allocation. Senior partners' income, on the other hand, may vary more widely based on individual performance.

2.5 Attractiveness, Height, and advantageous outcomes

A large body of literature has documented observed linkages between favorable physical traits and professional and socio-economic success across several scientific disciplines. A major portion of the research has its base on social stratification research, where height, attractiveness, weight, socio-economic, IQ, and education are factors used to explain socio-economic outcomes. In the below

sections we outline a portion of the vast literature that links attractiveness and height to economic outcomes and provide some insight into potential underlying mechanisms that might explain the positive relationship. Although, the explanatory mechanisms for attractiveness and height to some extent may relate to the same theories, we present each characteristic separately to provide a clear distinction of the argumentation presented in each field.

2.5.1 Attractiveness and the "beauty premium"

There is ample evidence supporting a so-called "beauty premium" in wages for attractive individuals. It is generally found that "*wages of people with below-average looks are lower than those of average-looking workers and good looking people receive a premium that is slightly smaller than this penalty*" (Hamermesh & Biddle, 1994). In addition, attractive individuals are more likely to be employed than the less attractive (Pfeifer, 2012) and are more likely to be successful in getting married (Jæger, 2011).

In measuring facial attractiveness, the most conventional method used is a survey approach, where respondents rate the attractiveness of individuals based on pictures. (e.g. (Hamermesh & Biddle, 1994) (Robins, et al., 2011)). In recent years, attempts have also been made to develop computational measurement of attractiveness. In Schmid, et al. (2006), a set of facial measurements - neoclassical cannons, golden ratio and symmetry - were found to be predictive of facial attractiveness when compared with responses from a survey approach.[4]

In addition to the broad evidence for the relationship between physical traits and overall labor market, marital, and socio-economic success, there are a few studies showing relationships between physical attractiveness and occupational success. Using a computational approach to measure attractiveness, Halford & Hsu (2014) finds facial attractiveness positively associated with overall higher wages and better share performance upon appointment of attractive CEOs. Additionally, competent looking CEOs earn higher wages and are also more likely to be CEO of a large entity (Graham, et al., 2014). Attractiveness has also been linked to higher transactional prices and wage for real-estate brokers, (Salter, et al., 2012), and increased chance of winning elections in politics (Berggren, et al., 2010). Attractiveness have also been linked to success for entrepreneurs, where attractive entrepreneurs are more financially successful and got perceived more favorable when presenting new ideas (Baron, et al., 2006).

A collection of studies further supports the link between attractiveness and success in professional service setting. Based on a sample of 289 advertising agencies, better-looking executives were found to generate higher revenue for their firms (Pfann, et al., 2000). Similar results were obtained by (Biddle & Hamermesh, 1998) in a longitudinal study with lawyers. The authors find a significant wage premium for physically attractive lawyers, which increases over time as the lawyers gain more

[4] Neoclassical cannons, Golden ratio and symmetry are popular computational approaches to assess beauty in faces. The concept of *"neoclassical cannons"* is a certain fixed facial proportions that have been proposed and used by artists dating back to the renaissance period as guides to drawing beautiful faces that is generally considered attractive (Farkas, et al., 1985). These proportions should be fixed, e.g. Forehead height = Nose length = Lower face height. Another proposed quantification and popular belief of beauty is that faces (or bodies) with proportions close to the "golden ratio" is considered aesthetically pleasing e.g. the Vitruvian man. The golden ratio, or in popular context "divine section" or "golden mean", is a reoccurring proportion in nature, geometry, and architecture. Lastly, symmetry takes its base in the preference for symmetrical configurations shown by many individuals in an experimental setting.

experience. Furthermore, the physically attractive lawyers were found to be better at attracting and retaining clients, indicating a link between attractiveness and fee generation for the law firm.

We have only been able to find one study relating to the audit industry including personal characteristics and physical appearance. In an experimental survey, Anderson, et al (1994) asked 120 auditors to rate 16 profiles on a 1-10 scale on the likelihood of becoming a partner, rise rapidly, and being dismissed involuntary. The result indicates that unattractive audit seniors are perceived less likely to advance their careers and more likely to be terminated early.

2.5.2 Explaining the beauty premium

Researchers trying to explain the so called "beauty premium" have focused on several possible explanations. In line with the argumentation of Jæger (2011), we will group the explanatory theories into evolutionary, social psychology, and social constructionism theories. We will begin with evolutionary explanation as it tries to explain the underlying mechanisms of why we consider things to be attractive:

2.5.2.1 Evolutionary explanation

The underlying argument in the evolutionary explanation is that the human brain through natural selection has developed information processing circuits to instantly recognize and instinctively evaluate physical "survival" traits (Rhodes, 2006). In the pre-historic environment, such traits could for instance be strength, reproductive quality and health of the individual. In the instinctive search for such favorable criteria, indicators for survivability would be considered attractive and deviations from the favorable traits would be considered unattractive. In effect, according to evolutionary psychology, physical attractiveness is a signal of mate quality i.e. the quality of an individual's genepool.

Two reoccurring observations in research support that attractiveness is a part of the biological heritage rather than inscribed by a cultural heritage. First, the fact that individuals of different cultures generally agree on which faces are attractive indicates a cross cultural norm for beauty (e.g. (Cunningham, et al., 1995) (Langlois, et al., 2000) (Rhodes, et al., 2001)). Second, preference for attractive faces emerges at young age, before cultural standards of attractiveness have influenced personal judgment (e.g. (Samuels & Ewy, 1985) (Slater, et al., 1998)).

In investigating the facial attractiveness and its linkage to mate quality, three specific facial traits emerge as a signal of mate quality among humans. The first is the preference for *averageness*, i.e. the preference for the arithmetic mean of facial configurations in a population *(*e.g. (Langlois & Roggman, 1990) (Langlois, et al., 1994) (Rhodes & Tremewan, 1996)). The second is the preference for bilateral *facial symmetry*, i.e. symmetric faces generated by morphing techniques are considered more attractive than the original face ((Perett, et al., 1999) (Rhodes, et al., 1998)). The third is the preference for *sexual dimorphism*, i.e. the preference for feminine traits in female faces and masculine traits in male faces (Rhodes, 2006). However, when feminine and masculine traits are exaggerated feminine traits increase attractiveness among both men and women (Rhodes, et al., 2000).

In addition to the biological explanation of attractiveness as an indication of mate quality, these above mentioned preferences have also been proposed as a by-product of the way human brains process information (e.g. (Enquist & Arak, 1994) (Jansson, et al., 2002)). One's self-perceived attractiveness

may also influence the opinion of the attractiveness of others (Little, et al., 2001) and faces with a resemblance to one's own is preferred among both men and women (DeBruine, 2004).

Even though the biological traits associated with physical attractiveness may not carry any advantages by themselves in a modern world, they are expected to carry a positive return according the evolutionary theory. In summary, the evolutionary explanation expect lasting socio-economic success for attractive individuals, as they, stemming from heritage or preferential treatment in their childhood, have skills that are productive in the labor markets (Liu & Sierminska, 2014).

2.5.2.2 Social psychology

The core explanation for attractiveness advantages in success in social psychology is the *"Physical attractiveness stereotype"* or "*what is beautiful is good stereotype*" ((Jæger, 2011) (Langlois, et al., 2000)). According to this stereotype individuals infer traits and qualities based on physical appearance, where physically attractive people are ascribed positive traits and unattractive people is ascribed negative traits. For instance, attractive people have been ascribed traits such as high intelligence, social competence, friendliness, likeability, and leadership skills (e.g. (Langlois, et al., 2000) (Mobius & Rosenblat, 2006)). Additionally, in an experimental negotiation physically attractive participants received a greater share of a surplus, even in cases where no visual contact took place. This finding indicates that attractiveness is favorable in negotiations and correlated to communication skills (Rosenblat, 2008).

The stereotyping of attractiveness might also carry social and behavioral consequences if the individual with favorable or unfavorable physical traits inscribe the positive or negative attributes to his/her identity, affecting behavior and the level of self-confidence. The behavior and self-confidence may in turn influence the individual's progression in the labor market and hence serve as an explanation for the "beauty premium". There is substantial evidence for the linkage between the individual's self-image and the level of self-confidence. Correlations between perceived appearance and self-esteem are high and robust across the life span and level of success, typically between .70 and .80 (Harter, 1993). The link between self-perceived attractiveness and earnings is tested in a recent study (Tao, 2008), where Taiwanese female college graduates who feel satisfied with their looks earn 3.4% more entry level wage. In summary, the social psychology explanation for the beauty premium is that attractiveness is favorable in the social context.

2.5.2.3 Social constructionism

The social constructionism explanation builds on the *"beauty is good"* stereotype and the wrongful inference of qualities due to physical appearance. However, in the social constructionism theory attractiveness is treated as a characteristic (similar to sex and race), which generates expectations about a person's other qualities (Jæger, 2011). The expectations in turn shape others' behavior towards the person inducing a positive or negative discrimination bias towards the individual. In a similar reasoning, physical attractiveness can act as a human health capital that can be used in exchanges to influence and dominate interaction (Mulford, et al., 1998). In a constructed social exchange experiment, the authors find that perceived (higher) attractiveness of the counterpart acted as a basis for predicting how cooperative the counterpart would be. That is: *"Having others see you as attractive brings opportunities for productive exchange because people often associate such perceptions with the expectation of cooperative behaviour […] compounded by the fact that many people simply like*

interacting with others they see as attractive" (Mulford, et al., 1998). In summary, the social constructionism explanation of the beauty premium regards attractiveness as a productivity enhancing characteristic of the individual that acts through the social mechanisms rather than having a direct relationship to success.

2.5.3 Height and success

The positive association between height and social status is one of the most consistent findings in social science (Lundborg, et al., 2012). In a broad body of literature, height has been found significantly related to measures of social esteem, leader emergence, and performance of individuals (Judge & Cable, 2004). Additionally, wage premiums for tallness, the so-called "height premium", is well documented across time, gender, and countries in previous research. The height premium in earnings varies between studies, countries, and gender, but is generally between 2.5%-10% in increased wages for every 10 cm of height. (e.g. (Hübler, 2009) (Lundborg, et al., 2012) (Case & Paxon, 2008) (Harper, 2000) (Loh, 1993)). Height is also related to success in various occupations. In a study by Adams, et al. (2014), individual characteristics of ~40 000 CEOs were compared with the characteristics of ~1 million Swedish men using military records. The results show that the CEOs generally possess considerably higher cognitive ability (e.g. induction, problem solving, and technical ability), higher non-cognitive traits, and being much taller at the age of 18 than the average population. In addition, the characteristics of CEOs were found similar to other high caliber professions such as doctors and consultants. The link between height and success is also found in academia, where faculty members were overall taller than the average population, further increasing with the higher ranking members of academic hierarchy (Hensley, 1993). Height has also been found to increase the probability of holding a managerial position (Lindqvist, 2010). Additionally, some evidence supports that height is important when persuasion and power are of special importance. For example, Kutz (1969) finds that when considering two qualified candidates for a sales position, the majority of recruiters (78%) choose the taller candidate.

2.5.4 Explaining the height premium

Several plausible explanations have been brought forward to explain the height premium. In developing countries where work tasks are more physically requiring, the height premium is attributed to higher physical strength (Dinda, et al., 2006). In a Western setting, discrimination against the very short and the very tall have been provided as a plausible explanation for the premium (Hübler, 2009). Height is also argued to be an indication of continuous investments in human health capital, where differences in earnings associated with height reflect differences in the individual's labor productivity (Heineck, 2004).

Among all explanations of the height premiums presented in research, most studies relate it to a strong correlation between height and non-cognitive abilities, for example social skills and self-confidence. For instance, Perisco, et al (2004) argues that the link between teen height and adult earnings is provided through participation in activities that build social skills and social capital. A common theory in social psychology is that tall individuals are more successful due to interpersonal dominance (Fireze et al. 1990).

Perisco, et al (2004) emphasizes the role of self-esteem in relation to the height premium, arguing that it stems from a greater self-image due to individual comparison with the socially accepted ideal height.

The higher self-image leads to higher success through factors such as perseverance and social skills. Through a meta-study of several height and labor market studies, Judge & Cable (2004) develops a conceptual framework in order to understand the linkage between height and career success. The authors argue that height is associated with higher self-esteem and social-esteem, which in turn affect the career success. The linkage to social-esteem takes its base in an argumentation similar to the social psychology explanation of attractiveness, where tallness is favorable in a social context since individuals infer positive qualities about taller individuals. This inference could lead to better subjective performance evaluations that positively affect the success of the individual (Judge & Cable, 2004).

In recent years of research, a different explanation of the relationship between height and higher earnings has been brought forward. Case & Paxon (2008) attributes the existence of the height premium to the correlation between height and cognitive ability, i.e. on average, taller people have higher cognitive abilities such as problem solving ability. The authors provide extensive arguments, but in summary they argue that certain growth factors, such as insulin-like growth, are believed to influence body growth and at the same time influence the areas in the brain where cognition occurs. Hence, sufficient nutrition when growing up acts as major determinant of adult height, non-cognitive and cognitive ability (Schick & Steckel, 2015).

In summary, the relationship between height and success acts through two dimensions. First, taller height is positive in a social context as its gives social preferential treatment and builds social skills in younger years. Second, height relates to success by being related to other productivity enhancing characteristics such as strength and cognitive ability.

3 Hypothesis development

According to Beattie, et al. (2004), "*an audit engagement is a complex, interactive, and judgmental process, which requires a high level of technical knowledge, integrity, and interpersonal skills from the auditor."* Due to the increased commercialization in audit industry, auditors are also required to act as salespersons to ensure client satisfaction and create more business opportunities for the audit firm. Therefore, to become successful in this industry, an auditor must possess personal qualifications that satisfy these expectations.

In labor market studies, facial attractiveness and height of individuals have been frequently tested with regard to professional success. Among other factors, facial attractiveness is linked to social skills and communication, which in turn cause observed professional success such as wage premium and victory in elections. Height, is not only linked to social skills, but also related to cognitive abilities such as problem solving and technical abilities, which could be related to the development of technical expertise.

Although personal qualifications are important for success in this industry, we haven't been able to find studies that examine the effect of these factors in relation to auditors' success. From the broad audit fee determinant studies (e.g. (Zerni, 2012)) and an audit compensation determinant study (Knechel, et al., 2013), auditor specialization is found positively and significantly related to higher

audit fees and compensation, which indicates a relationship between auditor individual factor and success although specialization is more linked to audit quality. Technical knowledge, integrity, and interpersonal skills are required from an auditor for an audit engagement, among which facial attractiveness and height are linked with social skills that could be similar to interpersonal skills and height is linked with cognitive ability that could affect technical knowledge. Therefore, we expect these two variables to be significantly associated with an auditor's success.

To measure an auditor's success, we refer to the revenue generation ability from audit engagements, measured as the amount of fees an auditor earns for an audit firm. Yet, an audit engagement is the collective work performed by a group of people, i.e. an audit team. The fee generation from an audit engagement may be partially attributed to team factors such the overall competitiveness of team members and how well they work together. Therefore, the linkage between the personal characteristics of an auditor and fees may be weak. Nevertheless, the auditor's role in an audit engagement is crucial. He/she is the person in charge of an audit, whose work ranges from audit presentation, price negotiations, maintaining relationships, accounting issue discussions, to audit quality supervision. Consequently, it is reasonable to assume that the auditor is to some extend affecting the sale and the outcome of an audit engagement, and thereby also the fee generation. Based on these views, we intend to test the following hypotheses:

H1: An auditor's attractiveness is significantly associated with fee generation.

H2: An auditor's height is significantly associated with fee generation.

Additionally, we refer to success on a personal level, measured through the compensation an auditor receives from the audit firm. Compared to fee generation, measuring auditors' compensation ensures a stronger personal linkage in the measurement of success and constitutes a direct measure of the individual talent. The mechanisms through which attractiveness and height influence compensation are of a more multi-dimensional nature for compensation than for fees. In other words, there are a larger number of surfaces of potential benefits (such as preferential treatment, improved social skills, and self-confidence) to the individual from favorable measures of facial attractiveness and/or height, which can contribute to the auditor's success. We consider height to be a proxy for cognitive ability as wells as act favorable in social interactions.

Based on the extensive findings in prior research that indicates a positive relation between facial attractiveness, height, and compensation, we formulate the following hypotheses:

H3: An auditor's attractiveness is significantly and positively associated with his/her compensation.

H4: An auditor's height is significantly and positively associated with his/her compensation.

4 Data sample collection

4.1 Fees, auditor compensation, and relevant information

For data collection, we use several approaches to gather relevant data and adopt screenings to ensure its quality. To begin with, we focus on signing auditors of Swedish listed companies from 2001 to 2013. The decision to look into public companies and specifically during this time period is mainly due to the availability of audit fee data, client company financial information, and auditors' photos, which have become more accessible in digital format in recent years. Names of the auditors were obtained from corporate annual reports of 409 listed companies on the Nasdaq Stockholm main list. However, companies with foreign domicile, i.e. with headquarters outside of Sweden, were excluded from the collection to ensure that all auditors are active in Sweden. Because large listed companies usually have more than one signing auditor, we categorize the auditors shown in corporate annual reports as 1st , 2nd, and 3rd signing auditor according to the order they are presented. Based on this categorization, we assume that the 1st signing auditor is the individual mainly responsible for the audit, i.e. the audit engagement partner. Information regarding audit fees and other fees were also collected from the notes of financial statements in corporate annual reports. According to IFRS, public companies are required to report the amount of fees the audit firm has invoiced the client during the fiscal year. Audit fees are all fees that relate to providing the statutory audit service. Other fees are fees for all other services provided by the audit firm. The audit fees and other fees are assigned completely to the 1st signing auditor. In case of a joint audit, i.e. singing auditors are from more than one audit firm, the 1st signing auditor from each audit firm was assigned the complete audit fees and other fees his/her audit firm invoiced the client company.

The names of identified 1st signing auditors were cross-referenced against the records of the Swedish Financial Supervisory Boards to ensure accuracy and obtain a unique identity number for each individual. Auditors who are not available in Swedish Financial Supervisory Boards are excluded from the data sample. At this stage, the raw data sample consists of 382 auditors. This number of auditors corresponds to 3420 client company fiscal years, which is the total number of years that client companies have been audited by these auditors and have fee information (audit fees and other fees) assigned to them.

Client company financial information was collected from Compustat and complemented with data from annual reports when specific data points or client company fiscal years were missing. For the 382 auditors, compensation data was collected from the public terminals at the Swedish Tax Authorities for all years an individual auditor was present in the sample. According to the Swedish Tax Authorities, three categories of income are subject to income taxes for an individual: income from employment, business income, and capital income. Income from employment includes salaries, bonuses, and other benefits provided by the employer. Business income includes income from all types of business. Capital income includes dividends, interest, and all other income from capital investments. It should be noted that the records of the Swedish Tax Authorities present capital income net of interest expenses and capital losses whereof the amount reported as capital income could be low, or in some cases negative for a specific year. Since benefits, salaries, and bonuses are taxed as employment income and dividends from the partnerships is taxed as capital income, all direct income from auditing activities as an auditor is included in the measure of total compensation. Although this

gives a good indication of compensation, it should be noted that allocation to pensions are not included, as these are not taxed until retirement. Hence, an auditor's actual compensation can be assumed to be even larger than direct income that we capture in the compensation measure. In total, 4322 auditor compensation years were collected.

The date of auditor certification as well as office location of each individual auditor were retrieved from the government authority *Revisorsnämnden (*The Supervisory Board of Public Accountants), which is the institution responsible for certifying and supervising auditors in Sweden. Audit firm financial information and the identity of CEO and board members were collected from annual report of each audit firm.

4.2 Auditor height and photo collection

Height information was obtained from the Swedish military records. Until around 2005, all Swedish males had to enlist and serve a period of military service. During the enlistment process, height and other test data were collected by independent military personnel, giving large credibility to the accuracy of the height measure. The average age is 18-19 when the height is measured, which can be considered a good indication of adult height. As only males were required to enlist and take the tests for the military service, height measurement is only available for males.

Photos of individual auditors were collected by using public search engines and professional networks to search for the auditors' names in combination with the name of the audit firm and different clients. As a second source, the annual reports signed by the auditors were screened for pictures. Finally, each audit firm and in some cases individuals were contacted to obtain the missing pictures. Through this process we were able to collect 238 pictures out of the 382 identified auditors.

Although we have pursued all means possible to obtain pictures of the auditors in our sample, a slight selection bias is introduced due to the fact that not all auditors have a picture. For example, more successful auditors, e.g. those auditing more firms or being audit firm CEO, might be more likely to have an online picture due to the higher probability of public coverage. Additionally, individuals might be reluctant to have an online profile picture due to personal reasons, e.g. feeling unattractive, privacy concerns, and other personal preferences. Lastly, it should be noted that the pictures finally obtained were of various quality, which could influence the overall measurement result.

In order to control the selection of pictures across the auditors we plotted the distribution (**Figure 1 - Distribution of pictures against ranking of number of observations per auditor**) of pictures across a success ranking (1-382) based on the frequency of observations in our sample. The X-axis represents the numbering of auditors according to their number of client company fiscal year observations. For instance, on the far left of the X-axis denoted 1 is the auditor that has the highest number of client company years with fee information. A high frequency for an auditor is an indication of consecutive generation of fees from several clients and hence, may prove as an indication of success over the whole period. The straight line on Y-axis represents the collection of the auditor's photo. For instance, we have the photo of the number 1 auditor.

Figure 1 - Distribution of pictures against ranking of number of observations per auditor

The distribution shows that the auditors we have photos tend to be the ones on the left hand side, which are the auditors who deliver audit engagements more frequently. There is a slight bias in the availability of pictures towards the top 250 most frequent auditors. However, as the auditors between 250 and 382 in the ranking only make up roughly 20% of the raw data, we consider any bias due to picture selection to be minor for our overall result.

4.3 Data selection and loss

In order to secure the quality of the dataset a stepwise screening process illustrated in **Table 1** was applied to the data. First the data was reformatted to long format depending on each auditor rather than year. Consequently, if a firm had 3 auditors signing the report for a fiscal year, the firm would repeat three times in the data, once for each auditor. Before omitting any data, we summed portfolios of client assets and all fees, for each auditor every fiscal year regardless of the auditor being the engagement partner, second, or third signing auditor. Hence the portfolio assets and the sum of total fees include all public firms audited by an auditor in a fiscal year. Following the summation of portfolios we applied a stepwise procedure omitting observations with missing data to obtain a complete set with the same individuals for both models.

To increase the homogeneity in client company characteristics in the fee models, we exclude all financial firms from the sample. This is a common practice in audit fee studies as financial firms share widely different characteristics from other firms (Hay, et al., 2006). In a second screening we exclude all client companies subject to a joint audit, where the annual report is signed by auditors from two audit firms that are mutually liable for the audit. The joint liability and larger number of individuals involved weakens the link between the client company's characteristics and the individual auditor. In a third screening all auditors missing a certification date for authorization as a public accountant were excluded as we were unable to verify career length and office location for these individuals. In a fourth screening all auditors without height and attractiveness ratings were excluded. As height was only available for males, this screen automatically excluded all female auditors. In a final screen we excluded all 2nd and 3rd signing auditors of the same firm as we attribute the fees to the engagement partner. After the final omission of data we split the dataset into two, the first on the basis of client company fiscal years and the second on auditor compensation years. In the final dataset for fees, one observation is one engagement partner auditing and generating fees for one client firm fiscal year. In the final dataset for compensation, one observation is the annual compensation of one auditor in one taxation year. The final complete data sets consist of the same 121 individual male auditors, which corresponds to 1491 client company fiscal years and 811 auditor compensation years.

Table 1 - Lost data to complete datasets

Reason for lost data	Change of observations	Observations
Initial sample		**3240**
Transform data to long format	1081	4321
Excluding financial firms and joint audits	-828	3493
No authorization date	-104	3389
Excluding Auditors with no Height and Picture	-209	3180
Excluding 2nd and 3rd signing auditors	-717	2463
Other loss of data for complete sets	-972	1491
Splitting sets		
Fee dataset		1491
Compensation dataset		811

5 Methodology

5.1 Measuring attractiveness

In measuring attractiveness of individuals, the conventional approach in psychological science is an experimental approach where subjects are asked to rate the attractiveness of original and altered pictures (e.g. (Langlois & Roggman, 1990) (Perett, et al., 1999)). In the social sciences literature, e.g. in studying appearance effect on labor market outcomes, attractiveness is conventionally measured by survey ratings of pictures, often on a scale from *Very unattractive* to *Very attractive*. (e.g. (Liu & Sierminska, 2014) (Jæger, 2011) (Pfann, et al., 2000)). In two recent studies, researchers have applied a more computational approach in which facial markers are used to calculate ratios that are compared against a modeled optimum. The computational approach was applied in one study by Halford & Hsu (2014) in which Anaface[5], an online software rating facial attractiveness based on preset algorithm calculating facial proportions of human faces, was used to generate facial attractiveness score. The Anaface algorithm uses a similar approach to the computational approach developed by Schmid, et al. (2006), using facial markers to determine a set ratios[6] that act as predictors of attractiveness.

Considering that an algorithm can be argued to provide a "non-subjective" assessment of attractiveness as well as speed and ease of rating, we initially used Anaface as the method of rating attractiveness. The software requires a user to assign markers to predetermined points on the face and only works well with front-facing pictures. From the facial markers the algorithm calculates a combined score on a scale of 1 to 10 and provides further explanations of which ratios that come out good and bad. With the requirement of front-facing pictures, all photos were screened based on the level of front-facing and horizontal alignment. Photos with poor horizontal alignment were rotated to ensure both eyes are on one horizontal line. Out of the 238 collected photos, 171 photos were possible to be rated by Anaface. A reoccurring observation during the rating process was that the resulting score was highly sensitive to the positioning of facial markers. In between two ratings of the same picture, the outcome could differ as much as two points on the ten point scale. Additionally, the

[5] The software is web-based and requires the user to upload a picture onto (Anaface, 2015). The complete algorithm is proprietary and not described fully on the website, but the FAQ page describes the methodology as follows: "*Our specific algorithm is proprietary, but we take into account many factors from neoclassical beauty, modern research papers, and our own scientific studies/statistical analysis. Examples include things such as comparing inner ocular distance to mouth width and nose width to face height.*"

[6] Schmid, et al. (2006) conducts as stepwise process in which ratios between markers were assessed towards golden ratios, symmetry and neoclassical cannon measurements as predictors of an attractiveness score. The prediction was fitted against a survey score of the same face and insignificant ratios where singled out.

average rating turned out to be high, with the average auditors scoring close to seven on the ten point scale. The high average is consistent with the findings of Halford & Hsu (2014), who obtained an average of 7.3 when using the Anaface algorithm to rate attractiveness of CEOs.

To investigate whether the Anaface rating provided reliable results we conducted an experiment in which two individuals were asked to subjectively rate the same 171 auditors using a ten point scale. The results from the experiment differed substantially from the Anaface results, with an average attractiveness rating of 4.6 out of 10. Additionally, for each auditor, pairwise correlation between the average Anaface rating and the average of the two raters was as low as 4%. The completely different results highlight substantial weaknesses for the computational approach, therefore we chose to discard it and use the conventional survey rating of attractiveness used in previous research.

In rating the attractiveness, the survey respondents (raters) were required to rate the complete sample of 238 pictures on a ten point scale where 1 equals *Very Unattractive*, 5 equals *Average Attractive for Age* and 10 equals *Very Attractive*. In addition to the score, the rater was asked to note if he/she recognized the auditor. Consistent with the methodology of Graham, et al. (2014), the scores given by the raters who recognized the auditors were excluded from the calculation of the attractiveness rating. In total, all 238 auditors were rated by a panel of 16 individuals. The panel of raters consisted of 5 women and 5 men below the age of 40 and 3 women and 3 men above the age of 40 in order to achieve a varied distribution of age and gender. The average age of the raters is 37 years. To investigate patterns in the ratings we compared the individual ratings between the old and young age group, between the same gender of different age groups, and between genders in the same age group. In this comparison no clear patterns emerged. On average, the young individuals rated the attractiveness similarly to the older individuals and on average both genders rated similarly. However, between individual raters, ratings of specific auditors diverged more substantially. The maximum standard deviation observed for an individual auditor was 1.72, with the maximum score of 8 and minimum the score of 2. The average score between raters also varied, with the lowest average score for all the auditors being 3.2 and the highest 6.3.

To adjust for any potential bias of individual raters, i.e. that an individual rater consistently gave high or low ratings to the whole sample, we truncated all scores of 10 and 1 and excluded them from the calculation of the attractiveness rating. Following the adjustment, the attractiveness rating for each individual auditor was calculated as the arithmetic mean of all remaining scores.

To further test the rating of attractiveness provided by the 16 raters, 50 of the 238 pictures were randomly selected and rated by a control group of raters. In total 50 responders were asked to rate the attractiveness of the auditors on the same ten point scale with a checkbox if the auditors were recognized. In total 29 complete responses with ratings of all 50 selected auditors were collected and adjusted similarly to the complete sample. The 29 respondents of the control group were on average younger than the 16 panel members. A statistical comparison between the control group and the panel presented in ***Table 2*** shows high uniformity in ratings. On average the control group gave a higher attractiveness score than the panel with an average rating of 4.95. The average standard deviation of the ratings were similar in both the panel and the control group, 0.900 and 0.811 respectively. On an individual auditor basis, pairwise correlation between the average rating of the panel and the average score of the control group was 0.889, which indicates consistent average scores across the two groups.

Table 2 - Comparison between selection of panel and control group ratings

	Panel	Control group
# of Males raters	8	16
# of Females raters	8	13
Average age of raters	37.35	33.11
# of omitted answers	4	6
Max rater average score	5.76	5.64
Min rater average score	3.58	3.36
Max rater Std. Dev.	1.869	1.984
Min rater Std. Dev.	0.898	0.771
Number of rated pictures	50	50

Average rating statistics	Mean	Std. Dev.	Max	Min	Count
Panel	4.80	0.900	7.14	3.46	50
Control group	4.95	0.811	7.13	3.50	50
Correlation between average ratings	0.889				

With the clear similarities between the control group and the panel, the additional test provides a strong indication that the panel ratings can be considered representative of the expected result if conducting a larger survey. Hence, we consider the ratings provided by the panel to be robust and used as an indication of attractiveness for the 121 auditors in our data sample.

6 Model specification

To examine whether facial attractiveness or height are significantly related to fee generation and auditor compensation, we use two different models adapted from prior research. For both models, facial attractiveness and height are added as experimental variables.

For modeling *fees*, similar to extensive studies in this area, we use an audit fee determinant model estimated by ordinary least squares (OLS) regression with unbalanced panel data. The independent variables chosen take their standpoint from Zerni (2012) as this study is conducted in the same geographical setting and it aims to connect auditor individual characteristics to audit fees. Moreover, explanatory factors frequently used in other studies are discussed and evaluated. In the "Development of the fee determinant models" section, we explain the development of the final models and the independent variables used to investigate the linkage between facial attractiveness, height, and fees. Definitions of independent variables used in the final fee models are summarized in ***Table 17*** (see appendix).

For modeling *compensation*, we use a mixed effect model similar to that used by Knechel, et al. (2013). In the "Development of the compensation model" section, we explain the development of the final model and the variables used to investigate the linkage between attractiveness, height, and compensation. Definitions of independent variables used in the final models are summarized in **Table 18** (see appendix).

6.1 Development of the fee models

6.1.1 Description of variables

Revenue generation is used as a measurement for an auditor's success. We test total fees as well as its separate components - audit fees and other fees. While audit fee determinants have been studied extensively in prior research, determinants of other fee and total fee haven't receive similar attention. Hay, et al. (2006) presents two views regarding the relationship between audit services and non-audit services, which are the complementary relationship due to cross-subsidization of fees or synergies between these two services and the positive association due to the increased demand for audit services following the purchase of non-audit services. Based on these views, we assume that there is a relationship between audit fee and other fee and that audit fee determinants should be able to explain certain level of other fee. Therefore, we test other fee with audit fee determinants and control for audit fee. Likewise, other fee is controlled in the audit fee model. For the total fee model, since audit fee is one element of total fee, we assume that audit fee determinants should also be able to explain certain level of total fee. Hence, we test total fee with audit fee determinants. The fee models therefore include three models with various dependent variables: (1) audit fees (2) other fees (3) total fees. The variable total fee is the sum of audit fee and other fee. Besides the difference in dependent variables, other fee is controlled in audit fee model and audit fee is controlled in other fee model to account for the assumed relationship between them. All three models have otherwise the same independent variables, which are the ones frequently tested in previous audit fee studies.

Independent variables used for all three fee models can be divided into three groups: Client company, audit firm, and auditor. The justification for including each independent variable is explained in the following section. The measurements of most independent variables are similar to Hays et al. (2006), Hay (2013), and Zerni (2012). The former two studies evaluate and summarize the large body of research that has examined the determinants of audit fee published from 1977 to 2007. The authors use meta-analysis to test the combined effect of the most commonly used independent variables, based on which they conclude the direction and significance of the relationships between these variables and audit fee. Additionally, we refer to the audit fee model used by Zerni (2012) due to the similar focus on audit engagement partners of Swedish listed company and the examination of auditor specific determinant, i.e. industrial specialization. Some variables are adjusted to natural logarithm (log) in order to obtain distributions close to normal distribution.

6.1.1.1 Client company relevant variables

Since an audit engagement is the review of the financial reporting of a company, client company specific characteristics that will influence the substance of this review will affect audit fee, other fee, and total fee charged. Characteristics of this kind include company size, complexity, industry, risk, internal control, and corporate governance.

Company size represents the scope of audit work. Normally, the bigger the company, the more audit work required. Therefore, it should bear a positive relationship with fees. It is so far most commonly used and most influential variable in audit fee studies (e.g. (Firth, 1985)). Common measurement is total assets.

Besides company size, the *complexity* of the organizational structure also affects the workload. Companies having subsidiaries and operations in foreign countries may require additional audit work such as the examination of regulatory compliance in various regimes and the review of consolidated financial statements. Thus, a positive relationship between complexity and fees is expected. The usual measurements are number of subsidiaries and foreign subsidiaries. With the time limitation of this study, we were unable to collect sufficient measurements of complexity to include it in the model. Hence, this variable is neglected.

Industry of a client company may also affect the audit workload since some industries are more difficult to audit than others (e.g. (Simunic, 1980)). Financial institutions are for instance often singled out due to its unique operations with completely different financial characteristics than other firms. Common treatments of industry are to include dummy variables for financial institutions, utilities, and manufacturing companies (Hay, et al., 2006). In our model, financial firms are excluded from the sample due to their inherent different characteristics. For the remaining industries, differences in fee levels are captured by employing fixed effects for each industry in the models based on 2 digit NAICS codes.

The *risk* of a client company indicates the corporate characteristics that may put an auditor in a risky position such as exposure to legal liability and default on audit work payments. Some accounting items are more complicated than others and require more advanced audit procedures, such as inventory and account receivables (Simunic, 1980). Without extra effort devoted to these items, auditors may fail to assure the quality of client company financial reporting and face legal liabilities. This kind of risk is usually measured as the proportion of inventory and account receivables in total assets. This ratio is expected to be positively associated with fees. Another kind of risk is related to a client company's financial capability to honor the commitment of audit and non-audit service payments. If a client company is performing poorly, it may default on the payments. Common measurements for this risk are return on assets, asset turnover, quick ratio, debt to total assets, and existence of a loss. The expected relationship with fees is negative for the first three ratios and positive for the last two ratios.

Internal control of a client company represents the existing control mechanism in the company. It is argued that if a client has good internal control, it needs less external audit work to improve its financial reporting quality since it already has good control in place. However, some studies ((Goodwin-Stewart & Kent, 2006) (Hay, et al., 2008)) argue that the amount of internal control can indicate the emphasis on audit quality and therefore leads to higher investments in external audit work. Thus, the expected relationship between internal control and fees is not confirmed. Common measurements are internal audit expenses, internal audit assistance, the ratio of internal audit costs to total assets, internal audit payroll, and number of internal auditors (Hays et al. 2006). For our models, this variable is neglected due to time limitation.

Corporate governance of a client company is related to the control environment (Hay, et al., 2006). Prior research measure this as the inclusion of outside directors, number of board meetings, audit committee expertise, audit committee meetings, and audit committee independence. All these variables are significant and positively related to audit fees in the meta-analysis (Hay, 2013). These results could be attributed to the fact that higher quality independent directors are more concerned

about the quality of financial statements, and will demand higher quality auditors from whom they expect high-quality work. Also, audit committee could be an ally of the internal audit department, trying to guarantee the audit quality. Therefore, a positive association between corporate governance and fees is expected. For our model, this variables is neglected due to data inaccessibility.

6.1.1.2 Audit firm relevant variables

Audit firms, the supplier of audit and non-audit services, influence the amount of audit fees, other fees, and total fees by the quality of services they provide, which can be captured by the size and location of an audit firm.

One factor influencing the audit quality is the *size* of the audit firm. A big audit firm has higher human capital to accomplish an audit engagement. For instance, the higher staff-to-partner ratio of a big audit firm provides economics of scale when compared to small audit firms operating with less staff (Knechel, et al., 2009). For the same reason, big audit firms are more capable of auditing big listed companies where audit workload is heavy. This capability also makes big audit firms more experienced in auditing public companies. Additionally, big firms are prone to provide high audit quality in order to protect firm reputation (DeAngelo, 1981). Hence, big audit firms are usually able to provide audit services of higher quality. The expected relationship between audit firm size and fees is therefore positive. A common measurement is a dummy variable indicating Big 4 audit firms. For our model, we control for each audit firm by adopting a fixed effect regression model in order to exclude the effect of audit firm size on audit fee.

Another factor influencing the audit quality of an audit firm is the *location* of its office. Being located in metropolitan areas provides access to larger pools of auditor candidates, allowing a more selective recruiting process and ability to attract and retain highly talented personnel (Francis & Yu, 2009). Additionally, the charge of audit services provided by an audit firm located in a metropolitan is generally higher, which reflects the higher costs, such as labor cost and office rent, of running such audit firm. Consequently, being located in a metropolitan is expected to be positively associated with fees. A common measurement is a dummy variable indicating the location of big city such as London (Hay, 2013). In our model, we introduce a dummy variable to identify whether the location an auditor registered operational is Stockholm.

6.1.1.3 Auditor relevant variables

An audit engagement partner is the main contact with a client company and the leader of an audit team (Beattie, et al., 2001). He/she interacts frequently with the client, for example discussions about compliance issues and negotiation about audit fees. Also, he/she supervises the audit work. Auditors who can manage these tasks well are more likely to be selected during a tender and therefore generate fees. Therefore, personal characteristics related to the performance of auditor-client interaction and audit work supervision should influence fees. These personal characteristics include career length, tenure, portfolio size, specialization, compensation, and leadership role assignment.

The *career length*, i.e. the number of years an auditor has joined this profession can be a general indicator of his experience. Normally, the longer he/she has been in this profession, the more experience he/she has and therefore performs better. Hence, the association between the career length and fees is positive. This variable has not been tested in previous studies, but we include it in our

model, which is measured as the difference between the year of audit engagement and the year granted public accountant certification.

Normally, the longer an auditor signs for a client company, the more familiar he/she is with the operation and financial reporting of the company. Hay (2013) argues that the *tenure* an auditor has been auditing for the same client is positively associated with the fee generated from the client. One reason could be the special fee discount, i.e. low-balling, many audit firms provide to a new client in the first year, which is no longer applicable in subsequent years if the client wishes to continue buying services from the same auditor (Pong & Whittington, 1994). Another possible reason is that once a client company works well with an auditor, the auditor has more pricing power due to the inherent risk the client bears if switching auditor. For example, the quality of auditor-client relationship and the audit work are unknown. Hence, we expect a positive association between auditor tenure and fees. A common measurement for tenure is the number of years an auditor has been the signing auditor for the same client.

Portfolio size of an auditor can be an indication of the competitiveness. If an auditor has a big portfolio size, it is possible that he/she audit several big client companies or many small client companies, which indicates that he/she is capable of auditing big firms or are chosen by many small firms as their auditors. Both of these indications represent the competitiveness of an auditor. Therefore, the portfolio size is expected to be positively associated with fee generation. Common measurements are an auditor's total audited assets and number of audited companies (Zerni, 2012). In our model, the portfolio size consists of the public assets audited by the auditor as the complete portfolios of the auditors are unavailable.

The *specialization* of an auditor represents how experienced an auditor is in auditing specific types of company such as public companies or manufacturing companies. If the auditor has more experiences in auditing companies that are of similar characteristics of a client company, it is likely that he/she dealt with similar audit work previously. Therefore, he/she should perform better in auditor-client interaction and supervision of the audit team for companies with similar profile. Hence, specialization is expected to be positively associated with fees. Common measurement is the percentage of an industry that is audited by an auditor (e.g. (Zerni, 2012)). In our model, this variable is neglected due to inaccessibility of the complete auditor client portfolio.

Other contributing personal characteristics to fee generation can be observed from *personal compensation* and *leadership role assignments*. If an auditor has higher compensation, it is likely that he/she is more competitive and therefore deserves higher incentives. Similarly, if an auditor is assigned leadership positions in an audit firm, it could indicate his/her competitiveness in management or generally higher value to the firm. The competitiveness captured by compensation and leadership role assignment can therefore predict how well they would perform if acting as an auditor and how much fee they would generate. Hence, a positive relationship between compensation, leadership role assignment, and fee generation is expected. Common measurements are annual compensation, previous assignment as CEO, and number of years having been a board member (Zerni, 2012).

6.1.2 Fee models specification

It is plausible that the pricing of audit and non-audit services differs due to audit firms, the industry of the client, and years that reflect changes in the auditing environment or economic condition. To

disentangle these variables from the partner specific effects on pricing, we employ fixed effects for each audit firm, client industry, and year. The client industry fixed effect is measured on the level of 2 digit NAISC industry classification codes.

With the same auditor being measured repeatedly, there is a risk of mutual dependence between observations, which can cause underestimated standard errors due to correlation between observations. To adjust for the mutual dependence, statistical significance figures are calculated by using standard errors adjusted for clustering within auditors. This adjusts the standard errors for correlation between the observations of the same auditor to not overstate the significance level of any of the explanatory factors (e.g. (Froot, 1989) (Rogers, 1993)). Additionally, to reduce the possibility of heteroskedasticity in the data we are estimating the standard errors of the parameter estimators using the so-called Sandwich technique ((White, 1980) (Huber, 1967)), which allows for standard errors that are robust for heteroskedasticity.

Based on the above discussion we employ the following models using an OLS regression:

Formula 1

$$\begin{aligned} AUD\_FEE \quad &= \beta_0 + \beta_1 OTH\_FEE \quad + \beta_2 ASSETSIZE + \beta_3 QR + \beta_4 DTA + \beta_5 ATURN \\ &+ \beta_6 ROA + \beta_7 INVREC + \beta_8 LOSS + \beta_9 LPF_{ASSET} + \beta_{10} BOARDYEARS \\ &+ \beta_{11} CEO + \beta_{12} CAREER + \beta_{13} TENURE + \beta_{14} BIG_{MARKET} + \beta_{15} LNFAI \\ &+ \beta_{16} HEIGHT + fixed\ effects + \varepsilon \end{aligned}$$

Formula 2

$$\begin{aligned} OTH\_FEE \quad &= \beta_0 + \beta_1 AUD\_FEE \quad + \beta_2 ASSETSIZE + \beta_3 QR + \beta_4 DTA + \beta_5 ATURN \\ &+ \beta_6 ROA + \beta_7 INVREC + \beta_8 LOSS + \beta_9 LPF_{ASSET} + \beta_{10} BOARDYEARS \\ &+ \beta_{11} CEO + \beta_{12} CAREER + \beta_{13} TENURE + \beta_{14} BIG_{MARKET} + \beta_{15} LNFAI \\ &+ \beta_{16} HEIGHT + fixed\ effects + \varepsilon \end{aligned}$$

Formula 2

$$\begin{aligned} TOT\_FEE \quad &= \beta_0 + \beta_1 ASSETSIZE + \beta_2 QR + \beta_3 DTA + \beta_4 ATURN + \beta_5 ROA + \beta_6 INVREC \\ &+ \beta_7 LOSS + \beta_8 LPF_{ASSET} + \beta_9 BOARDYEARS + \beta_{10} CEO + \beta_{11} CAREER \\ &+ \beta_{12} TENURE + \beta_{13} BIG_{MARKET} + \beta_{14} LNFAI + \beta_{15} HEIGHT \\ &+ fixed\ effects + \varepsilon \end{aligned}$$

The measurement of dependent variables: AUD_FEE is the natural log of audit fees invoiced by the audit firm of auditor *i* in year *t* measured in Swedish krona. OTH_FEE is the natural log of other fees invoiced by the audit firm of auditor *i* in year *t* measured in Swedish krona. TOT_FEE is the natural log of the sum of audit and other fees invoiced by the audit firm of auditor *i* in year *t*, measured in Swedish krona.

The measurement of independent variables: ASSETSIZE is the natural log of client assets in year *t* measured in million Swedish krona. INVREC is the sum of inventories and accounts receivables in relation to total assets in year *t*. ROA is return on assets measured as earnings before interest and tax (EBIT) divided the by total assets in year *t*. ATURN is asset turnover measured by total revenues

divided by total assets in year *t*. QR is quick ratio measured as the current assets minus inventories divided by current liabilities in year *t*. DTA is ratio of long term debt in relation to total assets in year *t*. LOSS is the dummy variable that takes the value of 1 if the client company has a loss in net income in year *t*. BIG_MARKET is the dummy variable that takes the value of 1 if the auditor is registered as operational in Stockholm. CAREER is the aggregate number of years in year *t* since the auditor was certified as a public accountant. TENURE is the aggregate number of years for which the auditor has been auditing the same public firm. LPF_ASSETS is the natural logarithm of the sum of total public assets of all clients of auditor *i* in fiscal year *t*, measured in billions of Swedish krona. LCOMPE is the natural logarithm of compensation (wage + capital income) for auditor *i* in year *t*, measured in thousands Swedish krona. CEO is the dummy variable that takes the value of 1 if the auditor has been CEO of the audit firm at least 1 year in the sample period 2001-2013. BOARDYEARS is the aggregate number of years for which an auditor *i* has been a member of the audit firm board. ε is the residual error term.

6.2 Development of the compensation model

6.2.1 Description of variables

Using personal compensation as a measurement of an auditor's success, we use the combination of two main sources of auditor compensation as the dependent variable: wage and capital income. Independent variables in this model can be divided into three groups: audit firm, auditor portfolio, and individual qualifications. Most of the independent variables used are the same as in Knechel, et al. (2013), which is so far the only research examining the determinants for auditor compensation based on Swedish archival data. However, as our data is limited to public entities, our measurements reflect the auditor's exposure to public companies and not the complete auditor portfolio. Some variables are adjusted to natural logarithm (log) in order to obtain distributions close to the normal distribution.

6.2.1.1 Audit firm relevant variables

The most common organizational structure of audit firms – a partnership structure – features an auditor compensation scheme consisting of two components: equal sharing and performance based sharing, where the equal sharing component is based on the overall profitability of an audit firm, out of which a fixed share will be allocated to an auditor. The factors that affect the performance of an audit firm are therefore indirectly affecting the compensation of an auditor. These factors include profitability, client portfolio, size, and location.

To account for performance of an audit firm, *profitability* is a major component. Especially since a fixed share out of profit will be allocated to an auditor, annual profit is a suitable measurement. Assuming that the allocation share is fixed over time, the more profitable an audit firm, the higher the auditor compensation stemming from equal sharing. Therefore, the expected association between profitability and compensation is positive. The measurements of profitability include financial ratios and the *client portfolio*, which should be positively related to fee generation. We refer to Knechel, et al. (2013) and measure profitability as the annual operational profit margin and total audited assets of an audit firm[7]. Another variable used by Knechel, et al. (2013) is the standard deviation of the size of audited assets among the auditors, which indicates the dispersion of the size of auditor portfolio within

[7] This measurement exclude an auditor's personal total audited assets. It is the total audited assets of other auditors.

the firm. We include this variable as well since it takes the differences between auditors' portfolio sizes into account.

Similar to our arguments in audit fee models, the *size* and the *location* of an audit firm are related to audit quality and therefore capability to generate revenue. Large firms have higher human capital, more experience in auditing big firms, and are more likely to provide audit work of high quality. Audit firms located in metropolitan are more likely to attract talented personnel producing high quality work. It is expected that client companies that care about audit quality will look for audit firms that can deliver desired level of quality. Size and location of an audit firm are expected to be positively associated with firm profitability. It is therefore also positively associated with auditor compensation. Common measurements of firm size and location are the number of partners and a location in big city (Knechel, et al., 2013). Without information about the number of partners, we use number of employees as a proxy for audit firm size. Furthermore, we include a "Big 4 audit firm" dummy variable to account for firm size.

6.2.1.2 Auditor portfolio relevant variables

The other component of auditor compensation, the performance based compensation, is attributed to the individual performance of an auditor. This part of auditor compensation is subject to personal contribution to the firm; however, it is not limited to revenue generated from fees, but also contributions in other formats such as analytical mindset and research skills that support the firm wide strategic planning. In this section, we focus on examining auditors' characteristics related to revenue generation of an auditor, which includes the size of an auditor's portfolio, total fee generated, the composition of new and old clients, and specialization.

The amount of revenue an auditor generates can be observed by the *size of his/her client portfolio*. Since the size of a client company can explain over 70% of audit fee (Hay, et al., 2006), it has high prediction power for revenue generation. Common measurements are total assets audited by an auditor.

Besides the existing profile of client portfolio, *the composition of the portfolio* is also important in examining the revenue generation of an auditor such as the proportion of new and old clients. For instance, auditors who are capable of attracting new clients and keeping old clients are deemed competitive in bringing in new business and preserving existing client base. Therefore, attracting new clients and keeping old clients should be positively associated with compensation. Knechel, et al. (2013) measures these as the total audited assets that belongs to new, old, and lost clients. However, the data is not accessible and therefore neglected in our model.

Another contributing factor to revenue generation is *auditor specialization*. As explained for fee models, specialization is associated with higher audit quality and should therefore be appreciated by clients. It is expected to be positively associated with compensation. Knechel, et al. (2013) measures it by a dummy variable indicating an industry specialization in an economically important industry segment[8] and the number of public clients in an auditor's portfolio. In our model, industry specialist

[8] An industry sector (two-digit NACE code) is considered economically important if it represents at least 1% of total sales of all Swedish enterprises (a total of 24 two-digit NACE codes meet the threshold). An audit partner is designated as an industry specialist if the size of his or her within-industry clientele in terms of audited total assets belongs to the highest decile of its annual distribution.

dummy is neglected because the data is unavailable. To observe general specialization in public companies, we single out auditors auditing more than 5 public clients in a year.

6.2.1.3 *Individual qualifications relevant variables*

In this section, we focus on personal characteristics that contribute to an audit firm although not directly related to revenue generation. These variables include career length and assignment of leadership roles.

In general, the longer an auditor joins this profession, the more he/she contributes to an audit firm based on his/her extensive knowledge and skills. He/she may know this profession very well and act as a consultant in the firm to provide operational opinions that helps the firm grow. *Career length* is expected to be positively associated with compensation. Knechel, et al. (2013) measures this as the difference between the year of audit engagement and the year granted public accountant certification.

Another important factor reflecting personal characteristics contributing to an audit firm is the *assignment of leadership roles*. As explained for the fee models, being assigned a leadership role indicates that the auditor possesses necessary knowledge and skills to accomplish tasks assigned for a leadership role such as organizational ability and communication skills. These qualifications, although not directly related to revenue generated from an audit engagement, add value to the firm and should be positively associated with his/her compensation. Common measurements are previous assignment as CEO and number of years having been a board member (Zerni, 2012).

6.2.2 Compensation model specification

To investigate the linkage between attractiveness and height with compensation we refer to Knechel, et al. (2013) and use a so-called mixed model that includes both fixed and random effects. In a mixed model we are able to control for auditor and clientele specific variations and address the potential problem of omitted variables. As an auditor's individual compensation consists of both wage income and capital income, there is a high possibility that unobserved factors for which we have no information will affect the level of compensation. Two such factors are capital income from sources other than the partnership and differences in level of debt carried by the auditor that generate interest expenses that are subtracted against the reported capital income. Further as argued by Knechel, et al. (2013), variation in compensation levels may relate to uncontrolled differences in the characteristics of individual partner clienteles.

The mixed model adjusts for these factors by introducing an individual auditor intercept that is treated as a mutually independent normally distributed random variable. In effect, a mixed model with a random intercept estimates the slope from fixed coefficients and then decomposes the remaining residual **R** into multiple elements across a hierarchical structure, allowing for variation in between auditors as well as the observations. In our model the lowest level in the hierarchy is the **observations** of compensation for each auditor in each year. The second level is the individual auditors i.e. all observations of compensation for each individual auditor. In using a mixed model, part of the variation in the residual is explained by the variation between the overall levels of compensation for the auditors. The remainder is the error term, ε. For a set number of auditors, the mixed model estimates a variance component of the deviations in the independent auditor's random intercepts. Consequently the variance of the intercepts are taken into account when fitting the model. Simply put, instead of

fitting the model only to the observations, it is also fitted towards the level of each auditor's observations.

The model is estimated using the Maximum Likelihood Principle (ML) to estimate the variance component of the random intercept in the model. A commonly observed caveat in using ML for estimation is that it might generate a negatively biased variance component. However, as our model is not static, i.e. the fixed variables changes between different estimations, ML estimation is required to compare the different models.[9]

Similar to the fee model, all t-statistics for the compensation model have been calculated adjusting for clustering between auditors ((Froot, 1989) (Rogers, 1993)). Additionally, the standard errors have been estimated using the sandwich-technique ((White, 1980) (Huber, 1967)) and are robust for heteroskedasticity.

Based on the above discussion, we employ the following model using a mixed model regression:

Formula 4

$$\begin{aligned} LCOMPE \quad &= \beta_0 + \beta_1 AFIRM\_PROFIT \quad + \beta_2 LFIRM\_ASSETS \quad + \beta_3 STD\_PF\_ASSETS \\ &+ \beta_4 LAFIRM\_EMP \quad + \beta_5 LPF\_ASSET \quad + \beta_7 LS\_TOTFEE \quad + \beta_8 CAREER \\ &+ \beta_9 BIG\_MARKET \quad + \beta_{10} BOARDYEARS + \beta_{11} CEO + \beta_{12} PUB\_COV \\ &+ \beta_{13} BIG4 + \beta_{14} LNFAI + \beta_{15} HEIGHT + \mu + \varepsilon \end{aligned}$$

The measurement of dependent variables: LCOMPE is the natural logarithm of compensation (wage + capital income) for auditor *i* in year *t*, measured in thousands Swedish krona.

The measurement of independent variables: AFIRM_PROFIT is operational profit margin for audit firm *i* in year *t.* LFIRM_ASSETS is the natural logarithm of all public assets being audited by other auditors than auditor *i*, from the same audit firm *f* in year *t*, measured in billions of Swedish krona. The measure is obtained by taking the natural log of the total public assets audited by firm *f* in year *t* subtract the size of each individual auditor's portfolio in year *t.* STD_PF_ASSETS is the standard deviation of the within firm partner portfolio for audit firm *f* in year *t*, measured in billions of Swedish krona. LAFIRM_EMP is the natural logarithm of the number of employees of the audit firm in year *t*. BIG_MARKET is a dummy variable that takes the value of 1 if the auditor is registered as operational in Stockholm. BIG4 is a dummy variable that takes the value of 1 if the audit firm is one of the Big 4 audit firms. LPF_ASSET is the natural logarithm of the total public assets being audited by auditor *i* in year *t*, measured in billions of Swedish krona. PUB_COV is a dummy variable that takes the value of 1 if auditor *i* has more than 5 public clients in year *t*. CAREER is the aggregate number of years in year *t* since the auditor was certified as a public accountant. BOARDYEARS is the aggregate number of years for which an auditor *i* has been a member of the audit firm board. The term μ represents a random auditor specific intercept used to capture the effects of unobservable factors. ε is the residual error term.

[9] An alternative would be to use the Restricted Maximum Likelihood (REML) in estimating the variance, which is often preferred in cases where the sample size is smaller. However, REML estimation cannot be used for models where the fixed effect changes, as it disregards the fixed effects in the estimation of the random variance.

6.3 Robustness testing the models

To ensure the robustness of the results, several robustness tests of the models are required. It should however be noted that our results are based on a sample unadjusted for the robustness tests described below.

To control for multicollinearity between the variables we conduct an analysis of the Variance Inflation Factors (VIF) between the independent variables. The result of the VIF analysis is presented at the end of the univariate correlation section.

In order to control for outliers that affect the results the data is winsorised at 1% and 10% level of the non-logarithmic form of all dependent variables (AUD_FEE, OTH_FEE, TOT_FEE, and COMPE) and the two experimental variables (LNFAI and HEIGHT). Using a stepwise procedure, each of the winsorised variables are introduced into the models alone and in different combinations. If the models generate a substantially different output when using the winsorised variables it indicates that the estimation of the coefficients are substantially affected by the level of the outliers.

As an additional test of the fit of the model and to control for the effect of poorly fitting values, all observations where the residuals are larger than +/- 1 in relation the fitted values are removed from the sample. The results from the truncated model are then compared with the original model in order to rule out that poorly fitting observations and outliers are affecting the estimation of the coefficients.

Finally, in order to test whether the selection of data and screenings have substantially influenced the main results, each model is regressed using the maximum possible sample of originally collected data. If the results of maximum sample deviate substantially from the main results, it is a strong indication of how the main results would be specific for the final sample rather than describing a general relationship for the audit profession. Consequently, if the changes in the results between using the maximum sample and the main results are minor, it serves as an indication that similar results would be obtained if using a larger or complete sample for all auditors.

For the fee models, financial firms and joint audits were still excluded in the maximum sample, since these factors increase noise in the dependent variables. However, as attractiveness is available for females, these were included when testing the facial attractiveness variable alone. Additionally, several males that we were unable to collect their pictures was included with height measure when regressing this variable alone. For the fee regression with both attractiveness and height, several individuals that were omitted due to missing data for the compensation model are included in the maximum sample.

For the compensation models the maximum sample estimations included all auditors that we had complete data. Hence, auditors that were omitted due to the data screenings used for the fee dataset such as the auditing of financial firms are included in the maximum sample, as none of the independent variables for the compensation model are affected by difference in characteristics of financial firms. A similar procedure to the fee models for the attractiveness and height variables are employed, where each estimation is conducted using all individuals with a rating of attractiveness or a measure of height.

The outcomes of the robustness tests are described under the result section for each model.

7 Initial data analysis and descriptive statistics

In this section, an analysis of the data in the final sample is presented. Initially, we present an overview of the distribution and characteristics of our dependent and experimental variables in the data. Subsequently, we discuss the descriptive statistics for both fee models and compensation model. In descriptive statistics, variables are presented in its unadjusted format, i.e. not transformed to natural logarithm format.

7.1 Analysis of the data sample

Our final data sample has been subject to several screenings that remove auditors based on missing data. In order to achieve comparability, we have adjusted the data sample to include the same auditors in all models, which has led to several auditors being excluded from all models based on missing data in one of the models. The screenings that reduced the data sample to the same set of individuals for all models resulted in a decrease of the data sample from 382 to 121 individuals. The distribution of the remaining 121 auditors based on frequency in the initial data sample is presented inional **bias** toward the top 100.

Figure 2. The X-axis represents the ranking of original 382 auditors according to their total number of client company fiscal year observations. From the far left of X-axis, the auditor having most data is denoted 1, to the far right of X-axis, the auditor having least data denoted 382 (see also **Figure 1** for comparison). The straight line on Y-axis represents the inclusion of the auditor in our final sample. We observe that the loss of data has skewed the distribution of the auditors to the top 200 most frequent auditors, with an additional bias toward the top 100.

Figure 2 - Distribution of pictures across frequency in final sample

With the bias toward the most frequent auditors, we see indications that a large part of our sample consists of the auditors who are specialized in auditing public companies. In a further investigation of the accumulative distribution of observations for the fee models (see **Table 3**) the bias toward publicly specialized auditors assumption is confirmed, since we see as few as 20 individuals making up 50% of the fee data. That is, the individuals in the range of 1-20 in **Figure 2** represent 50% of the observations in the final sample. Two conclusions can be drawn from the concentration of data: (1) The audit of public firms is fairly concentrated to a few auditors and (2) The characteristics of these auditors will influence the overall results.

Table 3 - Accumulative distribution of auditors in audit fee sample

Accumulated % of observations	Accumulated number of auditors	Auditors in percentile
10%	2	2
25%	7	5
50%	20	13
75%	43	23
90%	72	29
100%	121	49

The distribution of individuals in the dataset for compensation is presented in **Table 4**. An auditor will only be presented in the compensation data if he/she has been the singing auditor for at least one public company in each year. In total, twelve individuals have compensation data for all 13 years of our period, representing 19% of all observations in the data. Only 47 auditors have less than six years of data in the sample. With a large portion of individuals having several years of data, there is a reduced risk of having the characteristics of some individuals substantially influencing the results.

Table 4 - Number of auditors per number of years with compensation data

Years of data	# Auditors	% of total data
1	12	1%
2	10	2%
3	5	2%
4	11	5%
5	9	6%
6	14	10%
7	17	15%
8	6	6%
9	2	2%
10	9	11%
11	8	11%
12	6	9%
13	12	19%

7.2 Descriptive Statistics

In this section, descriptive statistics for both models are presented. For each model, overall descriptive statistics is presented, followed by a deepened analysis of the relationship between the dependent variables and the two experimental variables, facial attractiveness and height.

7.2.1 Fee models descriptive statistics

Table 5 - Descriptive statistics for fee model variables**Table 5** presents descriptive statistics of the variables in fee models. For audit fees (AUD_FEE), the average is 6.29 million[10]. It has a wide range in values, between 0.05 to 130 million, with a standard deviation of 13.86 million. For other fees, (OTH_FEE), the average is 2.97 million, which is lower than the average of audit fees (AUD_FEE). The range is

[10] All currency unit in this paper is Swedish Krona.

still substantial, from 0 to 109 million. The standard deviation is 7.33 million. For total audit fees (TOT_FEE), the sum of audit fees and other fees, the average is 9.25 million with a minimum of 100 thousands and a maximum of 218 million. The standard deviation of total fee is substantial amounting to approximately 20 million. The client company total assets (ASSETSIZE) is on average 12.939 billion. There is however substantial variation in client company size, the smallest company has assets of 6.8 million and the largest 3725 billion. The client company quick ratios (QR) is on average 1.53 (153%) and ranges between 0 and 30.26, with a standard deviation of 2.

The long term debt to total assets ratio (DTA) of client companies are on average 0.15. However, there is a large variation among client companies, ranging from 0 to 0.73, with a standard deviation of 0.16. The asset turnover ratio of a client company (ATURN), has an average of 1.15 times. The range is from 0 to 12.38, with a standard deviation of 0.85. For return on assets (ROA), the average is 0.02 with a minimum of -3.88 and a maximum of 1.30. The standard deviation is 0.24. The ratio of the combination of inventory and accounts receivables divided by total assets (INVREC) has an average of 0.33. This ratio has a high dispersion, ranging from 0 to 0.97 and a standard deviation of 0.20. For the dummy variable indicating loss (LOSS), an average of 0.26 indicates that 26% of the sample has a negative result in net income.

The total client portfolio of an auditor measured as total audited assets (PF_ASSET) has an average of 215.30 billion Swedish Krona. The values vary widely between auditors, ranging from 0.01 to 3087.05 billion. The standard deviation is 535.38 billion. The total compensation of an auditor (COMPE), including wage income and capital income, has an average of 3271.78 thousand. It has a wide range, from 271.53 to 16050.82 thousand. The standard deviation is 2567.85 thousand. For the total number of years an auditor has been a member of the audit firm board (BOARDYEARS), the average is 1.29 years. The range is from 0 to 13 years and the standard deviation is 2.48 years. For the previous CEO appointment dummy (CEO), it has an average of 0.15 indicating 15% of the sample has been CEO. The number of years an auditor has been a certified public accountant (CAREER) has an average of 21.15 years. This figure has a wide range from 1 to 39 years, with a standard deviation of 6.24 years. This indicates that the number of years the auditors in our sample has joined this profession varies a lot.

The number of years an auditor has been the signing auditor for one client company (TENURE) has an average of 3.3 years. The range is between 1 to 13 years and the standard deviation is 2.05 years. This indicates that some auditors have been signing for the same firm throughout the sample period 2001 to 2013. The dummy variable for an auditor being located in Stockholm (BIG_MARKET) has an average of 0.63, which suggests that 63% of our sample has been located in Stockholm. The facial attractiveness rating of an auditor (FAI), measured in a scale from 1 to 10, has an average of 4.51. It ranges from 2.69 to 6.93, with a standard deviation of 0.78. The height of an auditor (HEIGHT) has an average of 181.08 centimeter (cm). The range is between 168 to 195 cm and the standard deviation is 5.84 cm.

Table 5 - Descriptive statistics for fee model variables

Variable	N	Mean	Std. dev.	Min	Max
AUD_FEE	1491	6.287249	13.85899	.05	130
OTH_FEE	1491	2.967015	7.334674	0	109
TOT_FEE	1491	9.254264	19.85216	.1	218
ASSETSIZE	1491	12939.45	37854.94	6.571	372419
QR	1491	1.525544	1.996252	.0020728	30.25842
DTA	1491	.1496527	.1625262	0	.727003
ATURN	1491	1.1518	.849138	0	12.37518
ROA	1491	.0215572	.2408087	-3.876269	1.299263
INVREC	1491	.3311283	.1970533	0	.9741462
LOSS	1491	.2649229	.4414402	0	1
PF_ASSET	1491	215.3029	535.3819	.006571	3087.048
COMPE	1491	3271.784	2567.849	271.525	16050.82
BOARDYEARS	1491	1.294433	2.483468	0	13
CEO	1491	.1468813	.3541063	0	1
CAREER	1491	21.14554	6.243032	1	39
TENURE	1491	3.307176	2.047967	1	13
BIG_MARKET	1491	.629108	.4832057	0	1
FAI	1491	4.511659	.7840461	2.692308	6.933333
HEIGHT	1491	181.0758	5.837764	168	195

Several patterns emerge in a more detailed investigation of the distribution of fees in relation to the two experimental variables FAI and HEIGHT. There is no clear relationship between FAI and fees observed (see **Table 6**). The most attractive individuals (top 1%) have the lowest average fees in the sample, which are roughly 2 million audit fees and 1 million other fees. However, the individuals among the top 5% have the highest fees with an average of 19 million audit fees and 8 million other fees. Based on the average fees for each range of attractiveness, no clear patterns emerge that would suggest a strong relationship between facial attractiveness and fee generation.

Table 6 - Mean fees (millions) per percentile of FAI

Percentile	FAI Range	AUD_FEE	Std. dev.	OTH_FEE	Std. dev.	TOT_FEE	Std. dev.	N	#Auditors
99%	>6.69	1.941	1.583	1.057	1.793	2.998	3.073	12	2
95%	5.88-6.69	19.078	24.112	8.067	10.68	27.145	32.813	108	6
75%	4.94-5.88	4.749	8.673	2.000	3.258	6.749	11.284	295	25
50%	4.31-4.94	6.845	16.972	3.77	10.49	10.615	25.338	337	28
25%	3.8-4.31	6.068	12.873	2.851	6.841	8.919	18.561	475	30
10%	3.54-3.8	2.346	3.148	1.033	1.694	3.379	4.614	166	19
5%	3.46-3.54	3.106	6.054	1.576	3.595	4.682	9.52	41	5
1%	3.01-3.46	3.227	4.546	1.561	2.955	4.788	7.357	57	6

For HEIGHT, both audit fees and other fees are higher for the tallest individuals in the sample (see **Table 7**). The three individuals constituting the tallest 1% in the sample, with a height of more than 193 cm, have on average 22 million of audit fees and an additional 11 million of other fees. This is considerably higher than the mean audit fee of 6 million for the whole sample, indicating that height is positively associated with fee generation. However, the relationship is inconclusive, as the shortest 5% of the sample, also have substantially higher fees than the remainder of the sample with an average of 13 million of audit fees and an additional 6 million of other fees. On the other hand, if investigating the 10^{th} to 75^{th} percentile of height, a pattern of increasing audit and other fees emerges for each level increase in height. Based on an analysis of averages, we would expect height to be positively associated to fee generation.

Table 7 - Mean fees (millions) per percentile of HEIGHT (cm)

Percentile	HEIGHT Range	AUD_FEE	Std. dev.	OTH_FEE	Std. dev.	TOT_FEE	Std. dev.	N	#Auditors
99%	>193	22.086	31.671	11.138	19.812	33.225	46.593	71	3
95%	190-193	11.986	16.742	3.779	4.93	15.765	21.301	35	5
75%	185-190	5.463	13.963	2.294	5.564	7.756	19.047	316	26
50%	181-185	7.627	11.808	3.606	6.386	11.234	16.755	304	29
25%	178-181	2.135	3.012	1.433	2.94	3.568	5.445	450	34
10%	174-178	2.437	4.529	1.12	3.141	3.558	7.44	117	13
5%	173-174	13.076	18.794	6.189	11.965	19.266	28.553	102	6
1%	<170	7.937	16.728	2.839	5.345	10.776	21.873	96	5

7.2.2 Compensation model descriptive statistics

Table 8 presents descriptive statistics of the variables in compensation model. The total annual compensation of an auditor (COMPE), including wage and capital income is on average 2.7 million. However compensation varies substantially ranging from 271 thousand to 16 million. The standard deviation of compensation is 2.1 million. Operating profit margin of the audit firms (AFIRM_PROFIT) is on average 0.12. Substantial between firm variations is observed with the minimum profit margin being 0.01 and the maximum 0.27. The total portfolio size of other public auditors in the same audit firm (LFIRM_ASSETS) is on average 2411.49 billion, which ranges from 0 to 8022.45 billion. The standard deviation is 4.37 billion. The standard deviation of the client portfolio sizes (STD_PF_ASSETS) is on average 453.54 million. The range is between 0.38 to 1690.66 million, with a standard deviation of 187.72 million. The number of employees in an audit firm (LAFIRM_EMP) has an average of 1943 people. The range is from 72 to 3711 people, with a standard deviation of 897.60 people.

The dummy variable for an auditor being located in Stockholm (BIG_MARKET) has an average of 0.57, which suggests that 57% of our sample has been located in Stockholm. The Big 4 audit firm dummy variable (BIG4) has an average of 0.94, which suggests that most of our sample (94%) is one of Big 4 audit firms. The total client portfolio of an auditor (PF_ASSET) has an average of 177.53 billion. This figure varies widely between auditors, which ranges from 0.01 to 3087.05 billion. The standard deviation is 522.10 billion. The number of years an auditor has been a certified public accountant (CAREER) has an average of 20.08 years. This figure has a wide range from 1 to 39 years, with a standard deviation of 6.60 years. This indicates that the number of years the auditors in our sample have joined this profession varies a lot.

For the previous CEO appointment dummy (CEO), it has an average of 0.10 indicating 10% of sample has been CEO. For the total number of years an auditor has been a member of the audit firm board (BOARDYEARS), the average is 0.91 years. The range is from 0 to 13 years and the standard deviation is 2.15 years. The sum of audit fees and other fees an auditor earns in a year from his/her client portfolio (LS_TOTFEE) has an average of 21.21 million. There is a large variation between auditors, which ranges from 0.1 to 397.41 million. The standard deviation is 44.86 million. The facial attractiveness rating of an auditor (FAI), measured in a scale from 1 to 10, has an average of 4.46. It ranges from 2.69 to 6.93, with a standard deviation of 0.83. The height of an auditor (HEIGHT) has an average of 181.30 center meter (cm). The range is between 168 to 195 cm and the standard deviation is 5.47 cm. For average age of all the auditors is 50.92 years old. The range is between 36 to 68 years old, with a standard deviation of 6.32 years.

Table 8 - Descriptive statistics of compensation model variables

Variable	N	Mean	Std. dev.	Min	Max
COMPE	811	2670.77	2178.1	271.525	16050.82
AFIRM_PROFIT	811	.1182	.0554821	.0120963	.2687
LFIRM_ASSETS	811	2411.49	4.371	-0.00004	8022.45
STD_PF_ASSETS	811	453.5424	187.7183	.381716	1690.659
LAFIRM_EMP	811	1942.774	897.6027	72	3711
BIG_MARKET	811	.5734	.4948933	0	1
BIG4	811	.9362	.2451	0	1
PF_ASSET	811	177.5336	522.1023	.006571	3087.048
PUB_COV	811	.106	.308	0	1
CAREER	811	20.0826	6.5981	1	39
CEO	811	.10358	.3049	0	1
BOARDYEARS	811	.913687	2.1521	0	13
LS_TOTFEE	811	21.2111	44.8594	.1	397.41
FAI	811	4.4587	.82654	2.6923	6.9333
HEIGHT	811	181.3033	5.4686	168	195
AGE	811	50.9239	6.3202	36	68

Several patterns emerge in a more detailed investigation of the compensation in relation to the two experimental variables FAI and HEIGHT. For FAI, there are some indications of a positive relationship with compensation (see **Table 9**). The highest average compensation is obtained by the six individuals that are in the 95^{th} percentile of facial attractiveness. However, contradicting this is the fact that the most attractive individuals have the lowest average compensation. By just examining the mean compensation, there is no apparent positive relationship emerging in the data as the average compensation of the lower percentile groups of FAI are similar to those of the higher percentile groups.

Table 9 - Mean compensation (thousands) per percentile of FAI

Percentile	FAI Range	COMPE	Std. dev.	N	#Auditors
99%	>6.69	1727.009	704.569	12	2
95%	5.88-6.69	4269.484	2559.145	55	6
75%	4.94-5.88	2821.473	2709.472	149	25
50%	4.31-4.94	2251.955	1474.850	178	28
25%	3.8-4.31	3092.267	2542.847	228	30
10%	3.54-3.8	1951.321	1087.895	125	19
5%	3.46-3.54	2415.516	1492.793	28	5
1%	3.01-3.46	2017.096	911.879	36	6

For HEIGHT, there is some indication of a positive relationship as the tallest individuals (top 1%) on average earn substantially more than the remainder of the sample (see **Table 10**). Additionally the data indicates minor increasing averages in relation to height from the shortest group to the tallest group. Although the average compensation shows no clear positive relationship to height when moving up in the height ranges, a positive relationship could still exist, as standard deviation in each height range is substantial, sometimes as large as the average itself.

Table 10 - Mean compensation (thousands) per percentile of HEIGHT (cm)

Percentile	HEIGHT Range	COMPE	Std. dev.	N	#Auditors
99%	>193	4067.904	2362.664	29	3
95%	190-193	2042.989	1251.37	26	5
75%	185-190	2944.721	2427.57	182	26
50%	181-185	3241.895	3114.082	168	29
25%	178-181	2174.686	1200.187	252	34
10%	174-173	1941.281	1242.149	70	13
5%	173-174	2497.817	1235.619	45	6
1%	<170	3026.103	2207.102	39	5

8 Univariate results

8.1 Univariate correlations for fee model variables

Table 19 (see appendix) displays Pearson pair-wise correlations between all variables used in the fee models. The majority of correlations are significant at 1% level. Most independent variables show expected direction of correlations with audit fee, other fee, and total fee. This result suggests that our expected association between each independent variable and dependent variables is justified.

In particular, total fee (TOT_FEE) is highly correlated with client company size (ASSETSIZE) (0.866), auditor's client portfolio (LPF_ASSET) (0.546), and auditor's annual compensation (LCOMPE) (0.437). The same relationship holds for audit fee (AUD_FEE), which is highly correlated with other fee (OTH_FEE) (0.802), client company size (ASSETSIZE) (0.871), auditor's client portfolio size (LPF_ASSET) (0.556), and auditor's annual compensation (LCOMPE) (0.458). For other fee (OTH_FEE), it is also highly correlated with client company size (ASSETSIZE) (0.737), auditor's client portfolio (LPF_ASSET) (0.486), and auditor's annual compensation (LCOMPE)

(0.376). However, client company asset turnover (ATURN) is not significantly related to total audit fee (TOT_FEE) or audit fee (AUD_FEE).

Facial attractiveness rating (LNFAI) is positively and significantly correlated to all dependent variables: total fee (TOT_FEE) (0.195), other fee (OTH_FEE) (0.214), audit fee (AUD_FEE) (0.188). LNFAI is also positively and significantly correlated with main determinants of audit fee: client company size (ASSETSIZE) (0.162), auditor's client portfolio size (LPF_ASSET) (0.208), and auditor's annual compensation (LCOMPE) (0.146). Auditor's height (HEIGHT) is significantly correlated with total fee (TOT_FEE) (0.090), other fee (OTH_FEE) (0.109), audit fee (AUD_FEE) (0.089), and auditor's annual compensation (LCOMPE) (0.132). Compared to facial attractiveness rating, auditor's height is also positively and significantly correlated with all the fees, but the coefficients are lower. Auditor's height is also less significantly correlated with other independent variables. Interestingly, both facial attractiveness rating and height are significantly correlated with the previous assignment as CEO (CEO), career length (CAREER), and the audit firm location in Stockholm (BIG_MARKET). However, the directions are opposite. When facial attractiveness is higher, an auditor is more likely to have been assigned as CEO (0.245), less likely to have a long career length (-0.152), and more likely to be working in Stockholm (0.075). When an auditor is taller, he/she is less likely to have been assigned as CEO (-0.114), more likely to have a long career length (0.089), and less likely to be working in Stockholm (-0.102). The negative correlation between attractiveness and career length may suggest that younger people are deemed more attractive, assuming that career length is a close indication of age. In other words, age matters for attractiveness rating. The correlation between the two variables, LNFAI and HEIGHT, is positive and significant (0.169).

In order to test for multicollinearity between the variables we conduct an analysis of the Variance Inflation Factors (VIF). The VIF analysis indicates no problem with multicollinearity in any of the models as the values for all variables are below three. (e.g. (Menard, 1995))

8.2 Univariate correlations for compensation model variables

Table 20 (see appendix) displays pair-wise correlations between all variables used in compensation model. The majority of the correlations are significant at 1% level. Most independent variables show expected direction of correlations with auditor's annual compensation (LCOMPE). This result suggests that our expected association between each independent variable and the dependent variable is justified. All independent variables except LNFAI and HEIGHT have a significant correlation with a coefficient larger than 0.2. In particular, LCOMPE is highly correlated with audit firm operating margin (AFIRM_PROFIT) (0.399), public client coverage (PUB_COV) (0.348), auditor's client portfolio size (LPF_ASSET) (0.493), previous assignment as CEO (CEO) (0.323), the total number of years having been an audit firm board member (BOARDYEARS) (0.382), and sum of total fees (LS_TOTFEE) (0.553).

Between the independent variables, number of employees (LAFIRM_EMP) and Big 4 audit firm (BIG4) is significantly correlated (0.755). This suggests that a Big 4 audit firm is likely to have more employees. Additionally, total audited assets of an audit firm (LFIRM_ASSETS) and LAFIRM_EMP has a significant correlation (0.688). LFIRM_ASSETS also has a significant correlation with BIG4 (0.803). This indicates that big firms are likely to have big portfolio size. LFIRM_ASSETS also has a

significant correlation with standard deviation between client portfolios (STD_PF_ASSETS) (0.402). This indicates that the bigger the portfolio size of an audit firm, the higher the dispersion of portfolio size between auditors.

Facial attractiveness rating (LNFAI) is significantly correlated to LCOMPE (0.173), total audited assets of an audit firm (LFIRM_ASSETS)(0.154), number of employees (LAFIRM_EMP) (0.285), Big 4 audit firm (BIG4) (0.135), auditor's client portfolio size (LPF_ASSET) (0.161), previous assignment as CEO (CEO) (0.262), sum of total fees (LNSUM_TOTFEE) (0.181), and career length (CAREER) (-0.194). Auditor's height (HEIGHT) is only significantly correlated to LCOMPE (0.105) and the total number of years having been an audit firm board member (BOARDYEARS) (0.092). The correlation between the two variables, LNFAI and HEIGHT, is also positive and significant (0.171). In general, facial attractiveness rating (LNFAI) has more significant correlations with LCOMPE and other independent variables than auditor's height (HEIGHT).

Similar to the fee models, multicollinearity between the variables is tested by VIF analysis. With VIF values below four for all variables, the analysis indicates no problem with multicollinearity. (e.g. (Menard, 1995))

9 Results

The following section presents the results of the investigation. First, the results of the three fee models are presented, followed by the results of the compensation model.

9.1 Fee models

In this section, we present the regression results for all fee models. In the tables where regression results are shown, column (1) presents the regression results including experimental variable LNFAI separately. Column (2) shows the regression results including experimental variable HEIGHT separately. Column (3) shows the regression results including both experimental variable LNFAI and HEIGHT. For all models, audit firm, year, and the industry of client firm are controlled by using fixed effect in OLS regression.

In an attempt to confirm the reliability of the results several robustness tests were conducted. When winsorising the data at a 1% and 10% level for the dependent variables and the two explanatory variables HEIGHT and FAI, no major changes in the coefficients and their level of significance were observed. When omitting the observations with residuals larger than +/- 1 an overall and expected increase of the fit of the model was observed with increasing significance level of the explanatory variables. No major changes in the coefficients were observed. Finally, we observe no major changes in the coefficients and the level of significance for the variables when estimating the coefficients using the maximum possible sample. With all three tests indicating the same results as the main models the results of the fee models are considered robust. The results of each model are presented and discussed below.

9.1.1 Audit fee model results

Table 11 presents the regression results of audit fee model. In order to verify the regression models, we compare the results of independent variables except LNFAI and HEIGHT with prior research. In general, the variables show consistent results across (1), (2), and (3) regression models. Other fees (OTH_FEE), client company size (ASSETSIZE), quick ratio (QR), debt to total assets ratio (DTA), return on assets ratio (ROA), and the ratio of inventory and accounts receivable to total assets (INVREC) yield similar results as prior research. They represent the factors that have been consistently proved significantly related to audit fee: the size and risk of a client company and other fees. The audit firm location in Stockholm (BIG_MARKET) also shows a positive and significant result. Previous research of this variable has been proven significant mostly in studies conducted in UK, where the variable indicates the location of an audit firm in London. Our results indicate that the location of an audit firm in Stockholm also has positive effect on audit fees. Several variables yield insignificant results that are different from previous research: Asset turnover of client company (ATURN), existence of loss (LOSS), auditor's client portfolio size (LPF_ASSET), auditor's annual compensation (LCOMPE), the total number of years an auditor has been an audit firm board member (BOARDYEARS), previous assignment as CEO (CEO), and the number of years an auditor has been the signing auditor for one client company (TENURE). The new variable we introduce, career length (CAREER), is also insignificant. Nevertheless, considering that the variables that have been widely regarded as main determinants, i.e. ASSETSIZE, QR, DTA, ROA, and INVREC, give the same results in our models, we conclude our models sufficiently robust.

For our experimental variables, LNFAI is consistently insignificant when tested alone or along with HEIGHT. On the other hand, HEIGHT is two-tailed significant at 10% level when tested alone, with a coefficient of 0.006. This result suggests that every 10 cm increase in height is equivalent to a 6% increase in audit fee. When HEIGHT is tested along with LNFAI, significance increased to 5% level, with a coefficient of 0.007. This indicate that every 10 cm increase in height leads to 7% increase in audit fee. Considering that pair-wise correlation between LNFAI and HEIGHT is significant but low (0.169) and that height and attractiveness might influence the fee through the same mechanisms, a change in coefficients when including both measures is expected.

Table 11 - Audit fee model regression results

	Exp. sign	(1) AUD_FEE	(1) t-stat	(2) AUD_FEE	(2) t-stat	(3) AUD_FEE	(3) t-stat
OTH_FEE	+	0.013***	2.88	0.013***	2.96	0.013***	2.87
ASSETSIZE	+	0.669***	37.52	0.666***	36.18	0.667***	36.03
QR	-	-0.026*	-1.88	-0.027*	-1.88	-0.026*	-1.88
DTA	+	0.429**	2.11	0.438**	2.25	0.442**	2.22
ATURN	-	0.044	1.23	0.044	1.24	0.045	1.26
ROA	-	-0.376***	-4.51	-0.375***	-4.53	-0.376***	-4.54
INVREC	+	0.885***	4.22	0.890***	4.22	0.890***	4.22
LOSS	+	0.070	1.40	0.072	1.43	0.072	1.43
LPF_ASSET	+	0.014	1.41	0.015	1.48	0.016	1.56
LCOMPE	+	0.008	0.19	-0.004	-0.10	-0.005	-0.11
BOARDYEARS	+	-0.018	-1.62	-0.018	-1.62	-0.019*	-1.67
CEO	+	-0.011	-0.19	0.012	0.20	0.019	0.32
CAREER	+	-0.001	-0.20	-0.001	-0.29	-0.001	-0.39
TENURE	+	0.009	0.96	0.010	1.12	0.010	1.15
BIG_MARKET	+	0.113**	2.11	0.129**	2.33	0.129**	2.35
Intercept		7.971***	19.11	6.911***	11.21	6.908***	11.27
Experimental variables							
LNFAI	+/-	0.013	0.08			-0.052	-0.30
HEIGHT	+/-			0.006*	1.92	0.007**	1.99
Audit firm fixed effects?		Yes		Yes		Yes	
Year fixed effects?		Yes		Yes		Yes	
Industry fixed effects?		Yes		Yes		Yes	
N (# Auditors)		1491 (121)		1491 (121)		1491 (121)	
Adjusted R^2		0.877		0.878		0.878	

Notes: AUD_FEE is the natural log of audit fees in Swedish Krona. Statistical significance based on two-tailed tests at 1%, 5 % and 10% are denoted with ***, ** and * respectively. T-values based on standard errors adjusted for heteroskedasticity (White, 1980) and clustering within audit partners. Results for fixed effects are omitted from this table.

9.1.2 Other fee model results

Table 12 presents the regression results of the other fee model. The majority of independent variables are insignificant across (1), (2), and (3) regression models. Only three out of fifteen independent variables have been constantly significant, which are audit fee (AUD_FEE), client company size (ASSETSIZE), and return on assets (ROA). AUD_FEE and ASSETSIZE have positive coefficient (around 0.580 and 0.274), suggesting that audit fee and client company size have positive association with other fee. ROA has a negative coefficient (around -0.446), suggesting that return on assets has a negative association with other fee. These relationships are consistent with the regression result of audit fee models. However, the overall insignificant results suggest that the independent variables associated with audit fee model do not explain the other fee well.

For our experimental variables, both LNFAI and HEIGHT are insignificant across (1), (2), and (3) models. This result suggests that facial attractiveness and height of an auditor has no relation to other fees.

Table 12 - Other fee model regression results

	Exp. sign	(1) OTH_FEE	(1) t-stat	(2) OTH_FEE	(2) t-stat	(3) OTH_FEE	(3) t-stat
AUD_FEE	+	0.583***	9.49	0.579***	9.30	0.579***	9.35
ASSETSIZE	+	0.274***	5.21	0.275***	5.18	0.274***	5.20
QR	-	0.018	1.30	0.018	1.28	0.018	1.29
DTA	+	0.019	0.07	0.038	0.14	0.030	0.11
ATURN	-	-0.002	-0.04	0.001	0.02	-0.001	-0.02
ROA	-	-0.444**	-2.59	-0.448**	-2.61	-0.446**	-2.61
INVREC	+	-0.348	-1.42	-0.338	-1.38	-0.338	-1.39
LOSS	+	0.005	0.08	0.007	0.11	0.007	0.10
LPF_ASSET	+	0.004	0.16	0.006	0.25	0.005	0.21
LCOMPE	+	0.112	0.96	0.103	0.92	0.103	0.91
BOARDYEARS	+	-0.006	-0.32	-0.007	-0.38	-0.006	-0.35
CEO	+	-0.063	-0.67	-0.029	-0.29	-0.040	-0.40
CAREER	+	-0.010	-1.01	-0.011	-1.24	-0.011	-1.06
TENURE	+	-0.010	-0.38	-0.008	-0.32	-0.008	-0.33
BIG_MARKET	+	-0.106	-0.99	-0.093	-0.85	-0.094	-0.86
Intercept		2.132***	2.92	1.368	1.29	1.372	1.28
Experimental variables							
LNFAI	+/-	0.129	0.42			0.082	0.26
HEIGHT	+/-			0.005	1.06	0.005	0.87
Audit firm fixed effects?		Yes		Yes		Yes	
Year fixed effects?		Yes		Yes		Yes	
Industry fixed effects?		Yes		Yes		Yes	
N (# Auditors)		1439 (121)		1439 (121)		1439 (121)	
Adjusted R^2		0.688		0.688		0.688	

Notes: OTH_FEE is the natural log of non-audit fees in Swedish Krona. Statistical significance based on two-tailed tests at 1%, 5 % and 10% are denoted with ***, ** and * respectively. T-values based on standard errors adjusted for heteroskedasticity (White, 1980) and clustering within audit partners. Results for fixed effects are omitted from this table.

9.1.3 Total fee model results

Table 13 presents the regression results of total fee model. Most of independent variables are insignificant across (1), (2), and (3) models. The independent variables have been constantly significant are client company size (ASSETSIZE), debt to total assets ratio (DTA), return on assets (ROA), the ratio of inventory and accounts receivable to total assets (INVREC), existence of loss (LOSS), and the total number of years an auditor has been an audit firm board member (BOARDYEARS). ASSETSIZE, DTA, INVREC, and LOSS have positive coefficients (around 0.690, 0.412, 0.610, and 0.080 respectively), which suggest positive associations with total fee. ROA and BOARDYEARS have negative coefficients (around -0.553 and -0.024), which suggest negative associations with total fee. These relationships are consistent with the regression result of audit fee models except BOARDYEARS, which has a negative coefficient that is different from our expectation.

For our experimental variables, LNFAI is consistently insignificant when tested alone or along with HEIGHT. On the other hand, HEIGHT is significant at 10% level when tested alone, with a coefficient of 0.006. When HEIGHT is tested along with LNFAI, the coefficient increases to 0.007 with the same significance level. This indicate that every 10 cm increase in height leads to 7% increase in total fee.

Table 13- Total fee model regression results

	Exp. sign	(1) TOT_FEE	(1) t-stat	(2) TOT_FEE	(2) t-stat	(3) TOT_FEE	(3) t-stat
ASSETSIZE	+	0.690***	40.81	0.687***	39.22	0.687***	39.65
QR	-	-0.014	-1.19	-0.014	-1.22	-0.014	-1.19
DTA	+	0.412*	1.91	0.414**	2.00	0.425**	2.02
ATURN	-	0.046	1.28	0.045	1.25	0.048	1.32
ROA	-	-0.553***	-5.83	-0.551***	-6.00	-0.553***	-5.98
INVREC	+	0.606***	3.00	0.610***	3.02	0.611***	3.02
LOSS	+	0.078*	1.70	0.080*	1.75	0.080*	1.75
LPF_ASSET	+	0.012	1.02	0.011	1.03	0.013	1.16
LCOMPE	+	0.017	0.42	0.005	0.13	0.005	0.12
BOARDYEARS	+	-0.023*	-1.96	-0.023*	-1.90	-0.024**	-2.03
CEO	+	-0.030	-0.54	-0.019	-0.36	0.000	0.00
CAREER	+	-0.004	-0.98	-0.004	-0.93	-0.005	-1.14
TENURE	+	0.012	0.99	0.014	1.09	0.014	1.14
BIG_MARKET	+	0.078	1.17	0.093	1.37	0.094	1.41
Intercept		8.629***	23.47	7.596***	13.01	7.584***	13.19
Experimental variables							
LNFAI	+/-	-0.070	-0.37			-0.135	-0.68
HEIGHT	+/-			0.006*	1.67	0.007*	1.91
Audit firm fixed effects?		Yes		Yes		Yes	
Year fixed effects?		Yes		Yes		Yes	
Industry fixed effects?		Yes		Yes		Yes	
N (Auditors)		1491 (121)		1491 (121)		1491 (121)	
Adjusted R^2		0.865		0.866		0.866	

Notes: TOT_FEE is the natural log of Audit + Other fees in Swedish Krona. Statistical significance based on two-tailed tests at 1%, 5 % and 10% are denoted with ***, ** and * respectively. t-values are calculated using standard errors adjusted for heteroskedasticity (White, 1980) and clustering within audit partners. Results for fixed effects are omitted from this table.

9.2 Compensation model

In this section, we present the regression results for the compensation model. Similar to the structure of fee models, we present results of three regression model set-ups. In **Table 14**, column (1) presents the regression results including experimental variable LNFAI separately. Column (2) shows the regression results including experimental variable HEIGHT separately. Column (3) shows the regression results including both experimental variable LNFAI and HEIGHT.

In an attempt to confirm the reliability of the results several robustness tests were conducted. In order to control for outliers' effect on the result, compensation (COMPE), attractiveness (FAI),and height were winsorised at 1% and 10% level and regressed separately and stepwise together with the other variables. None of the winsorised results were substantially different from the original model. Further, we regressed compensation against the maximum possible sample. When regressed against attractiveness, the number of observations increased to 1311 whereof 8% was attributed to female auditors. When regressed separately against height the sample consists of 1534 income years of male auditors. Across all samples no large variations in coefficients and significance level were observed. We observe no major changes in the coefficients and the level of significance for the variables when estimating the coefficients using the maximum possible sample. Further, as Knechel et al. (2013) finds that compensation and determinants of compensation varies between different audit firms, it is plausible that the audit firm itself could explain a portion of the compensation. To investigate if the different audit firms significantly impact the coefficients we changed the Big4 dummy variables to fixed effects for each separate audit firm. When controlling for fixed effects for audit firms the coefficient for attractiveness (LNFAI) became slightly larger, with a similar significance level. All other coefficients remained similar to the original results. With the above tests we deem the results presented below in **Table 14** to be robust and representative.

Table 14 - Compensation model regression results

	Exp. sign	(1) LCOMPE	(1) z-stat	(2) LCOMPE	(2) z-stat	(3) LCOMPE	(3) z-stat
AFIRM_PROFIT	+	3.038***	8.31	3.076***	8.30	3.028***	8.27
LFIRM_ASSETS	+	0.032	1.47	0.031	1.41	0.031	1.41
STD_PF_ASSETS	+/-	0.000	0.81	0.000	0.82	0.000	0.80
LAFIRM_EMP	+	0.187**	2.54	0.231***	3.33	0.184**	2.53
BIG_MARKET	+	0.114	1.57	0.111	1.52	0.120*	1.65
BIG4	+	0.220	1.00	0.167	0.76	0.236	1.06
PUB_COV	+	0.085	1.37	0.085	1.35	0.087	1.40
LPF_ASSET	+	0.015	1.09	0.016	1.16	0.015	1.12
CAREER	+	0.044***	7.77	0.043***	8.05	0.045***	7.91
CEO	+	0.339***	3.33	0.426***	3.95	0.354***	3.36
BOARDYEARS	+	0.044***	3.98	0.043***	3.97	0.043***	3.93
LS_TOTFEE	+	0.041*	1.79	0.041*	1.77	0.040*	1.77
Intercept		2.834***	6.07	1.192	1.09	1.147	0.98
Experimental variables							
LNFAI	+	0.554***	2.74			0.505**	2.40
HEIGHT	+			0.012**	2.07	0.010	1.51
Random auditor intercept?		Yes		Yes		Yes	
Std. Dev (μ)[a]		0.3315***	-10.64	0.3305***	-10.44	0.3282***	-11.68
N (# Auditors)		811 (121)		811 (121)		811 (121)	
LR-test[b]		233.37***		220.41***		224.48***	
Wald chi2		485.29***		478.01***		499.16***	
BIC[c]		821.17		825.07		825.51	
-2 Log Likelihood		788.552		799.118		794.358	

Notes: LCOMPE is the natural log of compensation (wage + capital income) measured in in Swedish Krona. Statistical significance based on two-tailed tests at 1%, 5 % and 10% are denoted with ***, ** and * respectively. t-values are calculated using standard errors adjusted for heteroskedasticity by the Sandwich-method (White, 1980). [a]The standard deviation of the estimated auditor specific intercepts transformed from log format. [b]The significance of the error component is conducted by applying a Likelihood ratio test comparing the mixed model with a version of the model with only fixed effects. The random intercept is significant across all three models indicating that the mixed model gives a better result than an ordinary fixed model. [c]BIC (Bayesian Information Criterion) is a criteria for comparing different models. When adding parameters to a model likelihood increases which may result in over-fitting the model. The BIC adjusts for the level of parameters in a model with a penalty term for each parameter included into a model. Hence, lower values of BIC indicates a better fit of the model.

The majority of independent variables are insignificant across (1), (2), and (3) models. In order to verify the regression models, we compare the results of independent variables except LNFAI and HEIGHT with the results of Knechel, et al. (2013). Variables that are constantly significant are audit firm operating margin (AFIRM_PROFIT), audit firm size (LAFIRM_EMP), career length (CAREER), previous assignment as CEO (CEO), the total number of years having been an audit firm board member (BOARDYEARS), and total fees (LS_TOTFEE). AFIRM_PROFIT in particular, has the highest coefficient, which is around 3. These results are consistent with Knechel, et al. (2013). Although we measure audit firm size differently from Knechel, et al. (2013), who measure the number of partners, the result is significant indicating the positive association between audit firm size and

auditors' compensation. Also, we use two variables, CEO and BOARDYEARS, to measure the assignment of leadership role, while Knechel, et al. (2013) uses one variable to account for both CEO and board member experience. However, auditor's client portfolio size (LPF_ASSET) does not show significant results as Knechel, et al. (2013) does. LS_TOTFEE, the new variable we tested in the model shows significant result though. Since both variables give information about an auditor's revenue generation and LS_TOTFEE is the direct measure of fees, the variable may have fully captured the effect of the auditor's portfolio size. Considering the profit sharing set-up in a partnership organization, the variables may be relating to either the equal sharing component or performance based sharing component of compensation. AFIRM_PROFIT and LAFIRM_EMP represent the overall profitability and size of an audit firm, which relate to the firm-level revenue pool. CAREER, CEO, BOARDYEARS, and LS_TOTFEE represent personal competitiveness relating to individual performances.

When facial attractiveness (LNFAI) is tested alone, it is significant at 1% level with a coefficient of 0.554. This result suggests that for every 1% change in facial attractiveness rating, there is an approximately 0.55% increase in compensation. When LNFAI is tested together with auditor's height (HEIGHT), it remains significant at 1% level, with a lower coefficient of 0.505. This result suggests that every 1% increase in attractiveness rating is associated with a 0.5% increase in attractiveness. HEIGHT is significant at 5% level with a coefficient of 0.012 when tested alone. When FAI is also included, the level of significance of both variables decreases, probably due to the slight correlation between the two variables (0.17). The significance of HEIGHT decreases from a 5% one-tailed level to a 10% one-tailed level. FAI is significant at a 1% one-tailed level across both models.

10 Additional tests

10.1 Additional test for fee models

Although results generated from fee models and compensation models satisfy robustness tests and therefore are reliable to test our hypothesis, more tests can be done to further understand if the observed relationships between experimental variables and dependent variables hold in different circumstances. In order to deepen the analysis into the characteristics and relationship between the attractiveness and height, we extend our analysis by comparing different groups (attractive, unattractive, tall and short) within the sample. We introduce dummy variables ATTRACTIVE and UNATTRACTIVE that take the value of one for all individuals with an attractiveness rating of one standard deviation higher or lower than the average. Similarly, dummy variables TALL and SHORT are introduced for individuals that are taller or shorter than one standard deviation higher or lower than the average. Through this procedure, auditors bearing attractiveness scores below 3.6 are considered UNATTRACTIVE and above 5.3 are considered ATTRACTIVE relative to the rest of the sample. Auditors with height above 187 cm are considered TALL and below 175 cm are considered SHORT. The previously tested experimental variables, facial attractiveness rating (LNFAI) and height (HEIGHT), are replaced with the four dummy variables in audit fee, other fee, and total fee models. All additional assumptions and tests are the same as the main regression models. The results are presented in **Table 15**.

For facial attractiveness rating (LNFAI), the additional tests show results that are different from those of the main regression. There are positive and significant results for unattractive auditors (UNATTRACTIVE) in audit fee and total fee models. Moreover, the coefficients are sizable, 0.228 and 0.233. These results indicate that being unattractive leads to a premium in audit fee and total fee generation. That is, auditors bearing attractiveness score below 3.6 earn 26% more audit fees than the remainder of the sample. This result is inconsistent with the findings from main regression models, where facial attractiveness rating (LNFAI) has no relation to fees. Moreover, the attractive auditor group (ATTRACTIVE) show consistent insignificant results in all models. Considering the insignificant results observed in the main regression model and with the attractive auditor group (ATTRACTIVE) in additional test, it is unsure that the finding of an unattractive premium is reliable.

For height (HEIGHT), the results from additional tests do to a large extent confirm the positive relationship between height and fees. Across all models, the tall group (TALL) show consistently positive and significant results. The fact that TALL is the only individual specific variable that is significant in the regression of other fees suggests a relation between height and the ability to generate fees from non-audit services. However, the short group (SHORT) shows a surprisingly positive and significant result in the audit fee model, which indicates that being short leads to a premium in audit fee generation. The coefficient for SHORT is 0.095, which is still lower than TALL, 0.166. This result is consistent with the observation from the relative distribution of height and audit fee data, where there are peaks on both ends of height. In other words, audit fee of short and tall auditors is relatively higher than that of the auditors whose height are within plus and minus one standard deviation from the average. The overall audit fee of the SHORT group is lower than that of the TALL group. This observation explains the overall linear relationship we see in main regression models, where height bears a significant and positive result (around 0.006). Nevertheless, considering the low number of auditors included in the SHORT group, the result could be attributed to the existence of a few successful and short auditors. Hence, the audit fee premium for SHORT is deemed inconclusive.

Table 15 - Additional test results for fee models

	Exp. sign	(1) AUD_FEE	(1) t-stat	(2) OTH_FEE	(2) t-stat	(3) TOT_FEE	(3) t-stat
OTH_FEE	+	0.155***	6.09				
AUD_FEE	+			0.565***	8.88		
ASSETSIZE	+	0.578***	22.67	0.285***	5.34	0.688***	42.08
QR	-	-0.026**	-2.05	0.018	1.34	-0.014	-1.27
DTA	+	0.303*	1.69	0.020	0.07	0.383*	1.79
ATURN	-	0.053	1.44	0.004	0.09	0.047	1.30
ROA	-	-0.284***	-3.09	-0.442**	-2.54	-0.553***	-5.65
INVREC	+	0.923***	4.71	-0.321	-1.24	0.637***	3.16
LOSS	+	0.078*	1.67	0.018	0.27	0.093**	2.12
LPF_ASSET	+	0.010	0.90	0.003	0.11	0.010	0.81
LCOMPE	+	-0.016	-0.33	0.104	0.97	0.012	0.29
BOARDYEARS	+	-0.018*	-1.75	-0.008	-0.54	-0.028***	-2.66
CEO	+	-0.039	-0.62	-0.048	-0.46	-0.037	-0.57
CAREER	+	-0.001	-0.34	-0.012	-1.30	-0.005	-1.28
TENURE	+	0.011	1.39	-0.006	-0.24	0.015	1.18
BIG_MARKET	+	0.121***	2.63	-0.093	-0.85	0.103	1.65
Intercept		7.971***	17.25	2.536***	2.91	8.582***	24.00
Experimental variables							
ATTRACTIVE	+	0.091	1.25	0.019	0.12	0.023	0.22
UNATTRACTIVE	-	0.228***	2.64	0.134	0.77	0.233**	2.13
TALL	+	0.166***	3.55	0.154*	1.67	0.149**	2.21
SHORT	-	0.095*	1.80	0.138	0.93	0.086	1.21
Audit firm fixed effects?		Yes		Yes		Yes	
Year fixed effects?		Yes		Yes		Yes	
Industry fixed effects?		Yes		Yes		Yes	
N (# Auditors)		1491 (121)		1491 (121)		1491 (121)	
Adjusted R^2		0.891		0.689		0.867	

Notes: AUD_FEE is the natural log of audit fees in Swedish Krona. OTH_FEE is the natural log of other fees in Swedish Krona. TOT_FEE is the natural log of audit and other fees in Swedish Krona. Statistical significance based on two-tailed tests at 1%, 5 % and 10% are denoted with ***, ** and * respectively. t-values calculated on standard errors adjusted for heteroskedasticity (White, 1980) and clustering within audit partners. Results for fixed effects are omitted from this table.

10.2 Additional test for compensation model

The additional test for the compensation model is structured in the same way as for the fee model, where four dummy variables (ATTRACTIVE, UNATTRACTIVE, TALL, and SHORT) are introduced to further understand if the observed relationships between experimental variables and dependent variables hold in different circumstances

For facial attractiveness rating (LNFAI), the results of additional test, which are presented in

Table *16*, are consistent with our expectations. The significant coefficient (0.172) for ATTRACTIVENESS indicates an 18% premium in compensation for attractive auditors compared to the rest. This premium is significantly larger than previously observed attractiveness premiums from

broader labor market studies that usually amount to 4-7% (Hamermesh & Biddle, 1994). The coefficient for UNATTRACTIVE is negative but insignificant. These results strengthen the indication of a relationship between facial attractiveness and auditor's compensation.

For height (HEIGHT), the results of additional tests support a "beauty premium" in earnings. Height remains insignificant for both TALL and SHORT auditor groups. The results indicate that there is no apparent pattern of earnings premium for being taller or shorter in the audit profession.

Table 16 - Additional test results for compensation model

	Exp. sign	LCOMPE	z-stat
AFIRM_PROFIT	+	3.033***	8.44
LFIRM_ASSETS	+	0.032	1.41
STD_PF_ASSETS	+/-	0.000	0.80
LAFIRM_EMP	+	0.213***	3.05
BIG_MARKET	+	0.125*	1.70
BIG4	+	0.180	0.82
PUB_COV	+	0.084	1.34
LPF_ASSET	+	0.014	1.02
CAREER	+	0.043***	7.79
CEO	+	0.345***	3.24
BOARDYEARS	+	0.043***	3.90
LNSUM_TOTFEE	+	0.043*	1.84
Intercept	+	3.481***	8.19
Experimental variables			
ATTRACTIVE	+	0.172*	1.71
UNATTRACTIVE	-	-0.102	-0.85
TALL	+	0.127	1.43
SHORT	-	-0.066	-0.64
Random auditor intercept μ?		Yes	
Std. Dev (μ)		0.3285***	-10.65
N (# Auditors)		811 (121)	
Wald chi2		517.72***	
BIC		841.46	
LR-test		221.26***	
-2 Log Likelihood		717.077	

Notes: LCOMPE is the natural log of compensation (wage + capital income) measured in in Swedish Krona. Statistical significance based on two-tailed tests at 1%, 5 % and 10% are denoted with ***, ** and * respectively. t-values are calculated using standard errors adjusted for heteroskedasticity by the Sandwich-method (White, 1980).

11 Discussion and analysis

11.1 Fee generation and personal characteristics

Considering the importance of personal qualifications in audit engagements and the existence of a relationship between individual auditor factor and success suggested by previous literature (e.g. (Zerni, 2012) (Knechel, et al., 2013)), we expected a significant relationship between personal characteristics and fees.

From a reasoning based on previous research regarding personal characteristics and their relation to advantageous outcomes we formulated the below hypotheses:

H1: An auditor's attractiveness is significantly associated with fee generation.

H2: An auditor's height is significantly associated with fee generation.

The study's results indicate that the individual characteristics matter, but are not consistent between the two variables. When studying fee generation it needs to be noted, as discussed in the hypothesis, that an audit engagement is a collective team effort and therefore, the outcome will only be partially attributed to the work of the audit engagement partner. This is especially true for large, public companies, where the audit team consists of many people (Hellman, 2006). Therefore, the personal traits of the signing auditor may have limited relation to the outcome that is attributed to a group of people.

The measure of *facial attractiveness* was highly insignificant across all fee models, indicating no relationship between changes in the attractiveness rating and level of fees. Contrary to the "beauty is good" stereotype, the additional tests indicate a substantial premium in fees for the unattractive individuals amounting to 33%. However, the interpretations of this finding should not be overstated. The sample of auditors is limited to 121 individuals whereof nine are considered unattractive. Hence, if a few of these individuals are earning substantially higher fees, they alone could give rise to the significant difference between the unattractive group and the remainder of the sample.

An explanation of the inconsistent results between the main regression and additional tests could be that physical traits are positively related to higher fees, but that a subjective assessment of attractiveness is not. For instance, Graham, et al., (2014) finds that perceived competence, rather than attractiveness, explain higher earnings among CEOs. Given the importance of technical competence and trust in the audit profession, perceived competence rather than attractiveness may be the beneficial facial trait. On the basis of this discussion we consider the linkage between attractiveness and fee generation to be weak and reject Hypothesis 1.

In the main regression the results of *height* show a positive relation between height, audit fees and total fees, but insignificant results between height and other fees. The results indicate an approximate 7% increase in fees for every 10 cm of increased height. However, as total fees is the sum of audit fees and other fees, and the two are highly correlated, the significant relationship between height and total fees is most likely attributed to the relationship between height and audit fees. The additional tests indicate a stronger relationship between height and the level of fees. Across all three fee models we

observe a height premium of being tall amounting to between 15-16%. Especially interesting is the finding that the tall variable together with the audit fees, size and profitability of the client are the only independent variables significantly associated with other fees. This indicates that height could be beneficial in the sale of non-audit services. Another surprising finding is the minor and barely significant premium in audit fees for the short auditors. The explanation for this is inconclusive, but could potentially be related to team effects for the specific audit engagements of the shorter auditors.

Apart from the minor premium for short individuals in the additional test of audit fees, height is consistently positively related to fees. The results could be attributed to taller individuals having a greater self-confidence or being beneficially treated in social interactions, which in turn would be an advantage in obtaining higher fees. However, if the relation between height and fees is channeled through the mechanisms of self-confidence or social interaction, attractiveness should also be significant and positive, as attractiveness is generally also highly positively correlated with self-confidence and social benefits. Hence, a more plausible explanation is that the measure of height acts as a proxy for cognitive ability (Case & Paxon, 2008). With a relation between height and cognitive ability, taller auditors would be better in solving complex problems, a characteristic that can be expected to be beneficial for the quality of the audit and providing good solutions to the clients. On the basis of this discussion we consider the linkage between height and fee generation to be significant and accept Hypothesis 2.

In summary, while the results do not support any relationship between facial attractiveness and fee generation (H1 is rejected), there is support for a relationship between height and fee generation (H2 is accepted). The inconsistent results across the personal characteristics' relationship with fee generation can in part be explained by how fee generation is the result of a team effort and not the individual work of an audit engagement partner. Furthermore, it is likely that the relationship between height and fee generation is attributed to the mechanism of cognitive ability, since both height and facial attractiveness should have shown significant results if self-confidence and social benefits were the driving mechanisms.

11.2 Auditor compensation and personal characteristics

With the highly consistent finding of a positive relationship between facial attractiveness, height, and earnings in previous literature, we issued two one-tailed hypotheses that:

H3: An auditor's attractiveness is significantly and positively associated with his/her compensation.

H4: An auditor's height is significantly and positively associated with his/her compensation.

Unlike the fee models, where the emphasis is on revenue generation from audit engagements, the compensation model offers a more direct measure of the auditor's personal success. In relation to compensation we would expect all individual characteristics that are valued by the firm to be reflected in the level of compensation.

A large part of the compensation at the higher level of an audit firm is paid out as dividends based on two sharing systems: equal sharing of the firm overall profit and individual performance based sharing. The findings of Knechel, et al., (2013) indicate that both equal sharing and performance based

sharing is present within Big 4 partnerships as both fixed firm variables and individual performance variables are significant determinants of individual compensation. Huddart (2013) further comments on the findings of Knechel, et al., (2013) that both technical expertise and sales skills are rewarded in the partnership, which gives further insight into the state of value system within professional partnerships.

Our results partially confirm these arguments with significant relationships between both equal sharing and performance based indicators of compensation. A major portion of the compensation seems to be of an equal sharing nature as the variable with a coefficient of significance and highest value in the compensation model is found to be the overall profitability of the audit firm. According to our model, every percentage point in increased profitability for the firm is equivalent to an increase of compensation by 1.8 times (180%). Although the equal sharing indicators are highly influential, results of our tested personal characteristics, attractiveness and height, indicate that substantial variation in the level of compensation can also be attributed to the individual auditors.

For *attractiveness*, the results show a consistent positive relationship with compensation with a beauty premium amounting to 5% increase in compensation for every 10% increase in attractiveness. Moreover, the additional test indicates a 19% premium for the attractive group although the statistical significance of this result is lower than that of the main regression. The findings are consistent with prior research that have found an earnings premium (beauty premium) in relation to several occupations and overall for the labor market. With the similar and consistent results of a positive linkage between attractiveness and compensation, we accept Hypothesis 3.

For *height*, the results are less significant but conclusive in indicating a positive relationship between height and compensation. The results of the main regression indicate a height premium of approximately 7% for each 10 cm of increased height. Additionally, the results from the additional tests are consistent with the expected positive relationship for HEIGHT from the main regression as there is a positive significant relationship for TALL and a negative insignificant relationship for SHORT. With the consistent positive relationship between height and compensation, we accept Hypothesis 4.

The findings for both a*ttractiveness* and *height* are expected since they are in line with the social stratification and social psychology literature. These traits are generally found to be positively related to premiums in earnings and other advantageous outcomes. In relation to the audit literature, the findings become especially interesting as they give indications of what qualities that are valued in an audit partnership. Although we cannot say anything for certain with regard to what mechanisms are at play in explaining the observed premium, the mere presence of a premium for personal characteristics seems to empirically confirm the practical use of performance based sharing in the partnerships. The observed benefits and higher compensation relating to attractiveness can be expected to stem from the social benefits that attractive individuals enjoy under the "beauty is good" stereotype. The attractiveness could also be an indicator for self-confidence and communication skills, which gives the auditor advantages through the interactive channel. While the exact mechanism of attractiveness' linkage to compensation is obscure, it is fair to say that it is most plausibly related to the social (selling) rather than technical competence that might be awarded in the audit firm. Hence, the finding of a beauty premium serves as an indication of that interpersonal skills, or in extension, selling

capabilities are rewarded in the audit partnership. The results for height are harder to interpret as height is positively associated to, among other mechanisms, cognitive ability, positive discrimination and self-confidence. The finding of a height premium could be attributed to either increased cognitive ability, which in turn could serve as an indication of the auditor's ability to gain a technical savvy, or to social skills, which relates to selling ability.

In summary, the results support both a beauty premium and a height premium in relation to auditor compensation, resulting in acceptance of both hypothesis 3 and 4. These results are expected as they are in line with the extensive previous research in similar, yet different settings. The positive relation between facial attractiveness and compensation is most likely due to the mechanisms of self-confidence, communication skills and other social benefits. The mechanisms explaining the relation between height and compensation is more difficult to establish, but can be expected to relate to both social and cognitive abilities.

12 Conclusion

In this study, we have investigated whether physical characteristics significantly influence success in the audit profession. More specifically we explore if an attractiveness rating obtained by survey ratings of pictures and the height of the individuals are significantly associated with two measures of success for male auditors. The first measure of success is the level of fees, and consecutively revenue to the firm, that the auditor contributes to. The second measure is the monetary appreciation received from the audit firm in form of individual annual compensation. Two models have been applied to investigate the relationship: (1) an adapted version of the audit fee determinant model and (2) an extended version of the auditor compensation determinant model.

In total our sample encompasses attractiveness and height ratings for 121 male auditors, 1491 client company fiscal years of fee data and 811 years of annual auditor compensation data.

The results and analysis indicate that physical traits matters for fee generation and level of compensation. The results do not, however, provide evidence to validate an understanding of how, or through which mechanisms, attractiveness and height influence fees and compensation. For the level of fees, a significant and positive relationship is found for height, indicating a 7% height premium in fees for each 10 cm of increased height, while attractiveness has insignificant relationship with fees. For the individual auditor's compensation, both traits have positive influence on the level of compensation. Attractiveness is found to significantly impact the level of compensation with a beauty premium amounting to 5% for every 10% in increased attractiveness rating, while we find a height premium of 7% for every 10 cm increase of height.

Our study makes several contributions to research. First, through extending the sample to cover the years 2001-2013, we confirm some of the main findings of Zerni (2012) and Knechel, et al., (2013) in the subsequent years of the financial crisis. Second, by testing and comparing two approaches of assessing attractiveness, the computational and survey rating approaches, we highlight significant limitations of the computational approach. We find that the computational approach substantially overestimates the attractiveness compared to a survey rated sample, raising questions about the validity of using it as an approach in research. Third, by carrying out tests for other fees and total fees, we confirm that company size (total assets) and client firm profitability (ROA) are also determinants

of other fees besides audit fees. Fourth, by examining physical traits in the audit profession, we add to the social stratification literature in confirming the beauty premium and height premium in earnings in a previously untested profession.

Fifth, and most importantly, the significant results for height and attractiveness speak in favor of including personal traits as determinants when investigating fees and compensation in the audit profession. Until now, the personal traits of individual auditors have received limited attention in archival research. For future research, additional cognitive and non-cognitive characteristics, such as IQ and leadership ability, should favorably be included to shed further light on the influence of personal characteristics in the industry. Additionally, other perceptual characteristics of appearance, such as perceived competence, warmth, and trustworthiness, should be further investigated to achieve a deepened understanding of the characteristics of successful auditors.

Finally, some limitations of our study should be mentioned. First, the study is limited to public companies, where information regarding fees and singing auditors are publically disclosed. The findings are therefore based on the public clients in an auditor's client portfolio. Additionally, the study is based on auditors who have audited public companies within the time period 2001-2013. Auditors who are successful but only audits private clients during this period are excluded. Hence, the findings of this study are primarily related to the characteristics of public auditors. However, as most audit partners audit both private and public companies, we deem the results representative also for a larger sample.

Second, the source of height information, the Swedish military records, only have height data for males. Hence, female auditors were excluded from our final sample. The findings of our study, which are based solely on male auditors, will consequently be limited to extend broader conclusions about the male auditor characteristics. With a more extensive sample, researchers could investigate potential gender differences in the personal characteristics and their impact on success.

Lastly, there are limitations regarding the rating of attractiveness and the photos that have been gathered. Auditors without photos were excluded from the sample, which gives rise to a potential bias stemming from the availability of photo. Furthermore, the quality of the collected photos varies in size, resolution, and facial expression, which may influence the rating of facial attractiveness. For instance, a smiling face may receive a higher score than a neutral-looking face. Moreover, the rating is subject to the timing of photoshoot. Since we apply one rating based on one photo of each auditor over several years, the regression results may be high or low due to a photo being taken at a younger or older age. The photo may therefore, not be perfectly reflective of the true facial attractiveness at the time of the audit.

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14 Appendix

Table 17 - Definition of variables in fee models

Dependent variables	**Descriptions**
AUD_FEE	The natural log of audit fees invoiced by the audit firm of auditor *i* in year *t* measured in Swedish krona.
OTH_FEE	The natural log of other fees invoiced by the audit firm of auditor *i* in year *t* measured in Swedish krona.
TOT_FEE	The natural log of the sum of audit and other fees invoiced by the audit firm of auditor *i* in year *t*, measured in Swedish krona.
Independent variables	**Descriptions**
ASSETSIZE	The natural log of client assets in year *t* measured in million Swedish krona.
INVREC	The sum of inventories and accounts receivables in relation to total assets in year *t*.
ROA	Return on assets measured as earnings before interest and tax (EBIT) divided the by total assets in year *t*.
ATURN	Asset turnover measured by total revenues divided by total assets in year *t*.
QR	Quick ratio measured as the current assets minus inventories divided by current liabilities in year *t*.
DTA	Ratio of long term debt in relation to total assets in year *t*.
LOSS	A dummy variable that takes the value of 1 if the client company has a loss in net income in year *t*.
BIG_MARKET	A dummy variable that takes the value of 1 if the auditor is registered as operational in Stockholm.
CAREER	The aggregate number of years in year *t* since the auditor was certified as a public accountant.
TENURE	The aggregate number of years for which the auditor has been auditing the same public firm.
LPF_ASSETS	The natural logarithm of the sum of total public assets of all clients of auditor *i* in fiscal year *t*, measured in billions of Swedish krona.
LCOMPE	The natural logarithm of compensation (wage + capital income) for auditor *i* in year *t,* measured in thousands Swedish krona.
CEO	A dummy variable that takes the value of 1 if the auditor has been CEO of the audit firm at least 1 year in the sample period 2001-2013.
BOARDYEARS	The aggregate number of years for which an auditor *i* has been a member of the audit firm board.

Table 18 - Definition of variables in compensation model

Dependent Variables	**Descriptions**
LCOMPE	The natural logarithm of compensation (wage + capital income) for auditor *i* in year *t,* measured in thousands Swedish krona.
Independent Variables	**Descriptions**
AFIRM_PROFIT	Operational profit margin for audit firm *i* in year *t.*
LFIRM_ASSETS	The natural logarithm of all public assets being audited by other auditors than auditor *i,* from the same audit firm *f* in year *t*, measured in billions of Swedish krona. The measure is obtained by taking the natural log of the total public assets audited by firm *f* in year *t* subtract the size of each individual auditor's portfolio in year *t.*
STD_PF_ASSETS	The standard deviation of the within firm partner portfolio for audit firm *f* in year *t,* measured in billions of Swedish krona.
LAFIRM_EMP	The natural logarithm of the number of employees of the audit firm in year *t*.
BIG_MARKET	A dummy variable that takes the value of 1 if the auditor is registered as operational in Stockholm.
BIG4	A dummy variable that takes the value of 1 if the audit firm is one of the Big 4 audit firms.
LPF_ASSET	The natural logarithm of the total public assets being audited by auditor *i* in year *t,* measured in billions of Swedish krona.
PUB_COV	A dummy variable that takes the value of 1 if auditor *i* has more than 5 public clients in year *t*.
CAREER	The aggregate number of years in year *t* since the auditor was certified as a public accountant.
BOARDYEARS	The aggregate number of years for which an auditor *i* has been a member of the audit firm board.

Table 19 - Pearson correlations for fee models variables

Pearson's Correlation Coefficients Between Research Variables (N=1491)																			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) TOT_FEE	1.000																		
(2) AUD_FEE	0.976***	1.000																	
(3) OTH_FEE	0.898***	0.802***	1.000																
(4) ASSETSIZE	0.866***	0.871***	0.737***	1.000															
(5) QR	-0.194***	-0.219***	-0.128***	-0.144***	1.000														
(6) DTA	0.241***	0.242***	0.195***	0.401***	-0.110***	1.000													
(7) ATURN	-0.013	0.003	-0.026	-0.170***	-0.200***	-0.312***	1.000												
(8) ROA	0.265***	0.299***	0.199***	0.379***	-0.039	0.071***	0.066**	1.000											
(9) INVREC	0.059**	0.091***	-0.001***	-0.117***	-0.230***	-0.290***	0.487***	0.113***	1.000										
(10) LOSS	-0.297***	-0.318***	-0.236***	-0.376***	0.072***	-0.089***	-0.086***	-0.537***	-0.135***	1.000									
(11) LPF_ASSET	0.546***	0.556***	0.486***	0.603***	-0.090***	0.196***	-0.006	0.198***	-0.090***	-0.228***	1.000								
(12) LCOMPE	0.437***	0.458***	0.376***	0.450***	-0.080***	0.123***	0.008	0.165***	-0.022	-0.198***	0.586***	1.000							
(13) BOARDYEARS	0.280***	0.299***	0.240***	0.328***	-0.087***	0.093***	-0.064**	0.087***	-0.043	-0.158***	0.480***	0.494***	1.000						
(14) CEO	0.299***	0.318***	0.262***	0.294***	-0.065**	-0.002	0.052**	0.081***	0.107***	-0.146***	0.409***	0.376***	0.242***	1.000					
(15) CAREER	0.167***	0.183***	0.113***	0.211***	-0.035	0.114***	-0.009	0.121***	0.001	-0.139***	0.227***	0.302***	0.207***	-0.034	1.000				
(16) TENURE	0.105***	0.118***	0.048	0.094***	-0.058**	-0.031	-0.029	0.109***	0.029	-0.117***	0.070***	0.178***	0.132***	0.035	0.279***	1.000			
(17) BIG_MARKET	0.215***	0.225***	0.181***	0.204***	-0.014	-0.005	0.039	0.048*	-0.094***	-0.064**	0.387***	0.279***	0.266***	0.232***	0.014	-0.052*	1.000		
(18) LNFAI	0.195***	0.188***	0.214***	0.162***	-0.047*	0.013	0.099***	0.038	0.054**	-0.063**	0.208***	0.146***	0.037	0.245***	-0.152***	0.002	0.075***	1.000	
(19) HEIGHT	0.090***	0.089***	0.109***	0.050*	0.014	-0.005	-0.003	0.030	-0.051**	-0.041	0.021	0.132***	0.054**	-0.114***	0.089***	-0.049*	-0.102***	0.169***	1.000

Note: Statistical significance at 1%, 5 % and 10% are denoted with ***, ** and * respectively

Table 20 - Pearson correlations for Compensation model variables

Pearson's Correlation Coefficients Between Research Variables (N=811)															
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) LCOMPE	1.000														
(2) AFIRM_PROFIT	0.399***	1.000													
(3) LFIRM_ASSETS	0.202***	0.016	1.0000												
(4) STD_PF_ASSETS	0.242***	0.261***	0.402***	1.000											
(5) LAFIRM_EMP	0.262***	0.037	0.688***	0.166***	1.000										
(6) BIG_MARKET	0.265***	-0.012	-0.0620*	-0.014	0.041	1.000									
(7) BIG4	0.289***	0.100***	0.8030***	0.268***	0.755***	0.039	1.000								
(8) PUB_COV	0.348***	-0.010	0.0719*	0.003	0.102***	0.240***	0.090**	1.000							
(9) LPF_ASSET	0.493***	0.031	0.0387	0.121***	0.087**	0.366***	0.148***	0.410***	1.000						
(10) CAREER	0.273***	0.115***	-0.268***	-0.066*	-0.248***	0.109***	-0.262***	0.107***	0.169***	1.000					
(11) CEO	0.323***	-0.034	0.019	0.034	0.011	0.220***	0.039	0.172***	0.311***	-0.005	1.000				
(12) BOARDYEARS	0.382***	0.116***	-0.161***	0.013	-0.107***	0.233***	-0.064*	0.276***	0.369***	0.176***	0.215***	1.000			
(13) LS_TOTFEE	0.553***	0.024	0.166***	0.073**	0.222***	0.322***	0.261***	0.488***	0.810***	0.194***	0.333***	0.367***	1.000		
(14) LNFAI	0.173***	0.009	0.154***	0.017	0.285***	0.007	0.135***	0.084**	0.161***	-0.194***	0.262***	0.021	0.181***	1.000	
(15) HEIGHT	0.105***	0.060*	0.049	0.048	0.051	-0.078**	0.021	-0.018	-0.006	-0.056	-0.068*	0.092***	0.027	0.171***	1.000

Notes: Statistical significance at 1%, 5 % and 10% are denoted with ***, ** and * respectively

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