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RETURN ON INVESTMENT OF BACKGROUND SCREENING

In an increasingly globalized, virtual labour market human resource managers are increasingly facing the problem of adverse selection and the need to identify "borrowed" or "embellished" CVs. Background verification is a screening device that weeds out untrustworthy applicants, and helps evaluate the character of prospective staff. By hiring ethical people whose profile corresponds to vacancies, companies hope to increase their profitability and reduce the negative consequences of "poor" hire. From a literature review, this paper aims to develop a tool to estimate the return on investment of background check.

Keywords: employee selection device, background screening, ROI, Theory of Reasoned Action, Asymmetry of information

Introduction

The quality of employees (moral, attitude, qualifications, and knowledge) is a critical factor contributing to the success of a company. Wright and McMahan's work (1992) points out the key role human resources play in creating a firm specific competitive advantage. It is important for a company to hire the right person with the right attitude and background. With the increased mobility of employees (on average an employee will change employer 10 times in the U.S., Bureau of Labor Statistics, 2008), globalization and virtualization of the labour market, human resource managers are increasingly facing the problem of adverse selection. In economic theory a solution to this problem is the establishment of a system of screening. Practically it is about identifying applicants that have "borrowed" or "embellished" their CV. In North America, since 2001, and following some publicized law suits for hiring negligence more and more companies are using pre-employment checks. In 2004 according to a survey conducted by the Society for Human Resource Management 82% of the HR managers indicated that they conducted some degree of screening job candidates. However most HR managers have been facing a problem: due to the fear of lawsuits, many companies in North America do not provide references regarding former employees. They only acknowledge that the employee did work there (Cadrain, 2004). In order to increase the chance to hire a person with the right attitude and the required skills employers are increasingly becoming aware of the value of conducting complete background verification. The purpose of a complete check is to verify factual background information provided in the CV (education, employment history) and uncover any derogatory background information not provided by the applicants (Adler, 1994). A complete check include a combination of criminal record check, employment references, character references, a credit check, educational/qualification verification, the confirmation of a drivers license or accident history. Truly detailed checks could also include other services (see Wang and Kleiner, 2004 for an exhaustive list) and cross-referencing (Bonanni, Drysdale, Hughes, Doyle, 2006). Complete background verification is complementary to traditional selection devices used by HR managers. It usually occurs when the employer is interested in hiring the applicants after interviews. However with background checks there is no "test' for applicants to take or interview questions for them to answer. The candidate usually signs a release form authorising the employer to conduct the background verification.

In addition of helping weed out untrustworthy or ineligible applicants, background checks can also help evaluate the character of prospective staff. The integrity of the person is assessed by the accuracy of information provided in his/her CV. By hiring ethical people whose profile corresponds to vacancies, companies hope to increase their profitability and reduce the consequences of "poor" hire on the motivation of employees and corporate reputation. From a literature review, this paper aims to demonstrate the advantages of background checking and to develop a method to evaluate its return on investment.

The paper is organized as follows. The first section presents an overview of the potential benefits of background verification. The second section refers to theories justifying the use of this screening device. Section three presents an approach to estimate the benefits of background screening. The discussion section presents the method to estimate empirically the ROI and the limitations of the approach. The final section concludes and introduces future work to be conducted in this field.

I: EXPECTED BENEFITS OF BACKGROUND VERIFICATION

In some industry like the banking industry, checking job applicants' background is encouraged. A 2005 FDIC guidance states that having an effective background screening in place can help banks reduce turnover, deter fraud and embezzlements and avoid litigation over hiring practices. Financial institutions in general are prohibited from hiring any employees with a criminal offence conviction involving dishonesty, breach of trust or money laundering. In other industry employers also want to protect themselves against employee misbehaviour[1].

Vardi and Wiener (1996) defined organizational misbehaviour (OMB) as any intentional action by employees that defies and violates (a) shared organizational norms and expectation or (b) core societal values, norms, and standard of proper conduct. They classify employee misbehaviour in three categories according to their underlying motivation: (a) misbehaviour intended to benefit the self (Type S), like steeling, (b) misbehaviour intended to benefit the organization in the short-run (Type O), like lying to a customer, and (c) misbehaviour intended to inflict damage (Type D), like damaging company's property. Behaviour types S and D affect a company bottom line in the short-run however type D behaviour can affect the reputation of a company in the long-run. Analoui and Kakabadse (1992) found in their six-year study of 451 incidents evidence that both managers and employees engage in organizational misbehaviour. Their classification of the form of misconduct is more detailed than Vardi and Wiener (1996). They report six categories: theft and pilferage, rule breaking, destructive behaviour, uncooperative behaviour, disruptive behaviour, and misuse of facilities. They also highlight the human needs that these behaviours satisfy: self-expression, alleviation of tension, and financial benefits.

Economic theory also sheds some light on employee misconduct or opportunistic behaviour. Opportunistic behaviour has been coined 'behavioural uncertainty" by Williamson (1985). This refers to self-serving actions on the part of managers or employees that breach their explicit or implicit contractual relationships with the firm. A traditional example of opportunistic behaviour is when managers increase their personal welfare at the expense of the firm's owners and the overall value of the firm (Jensen and Meckling, 1976).

According to Campbell and Lefler (2009) the risk of these misconducts becomes more acute in period of economic crisis. They state that during the 2008 economic downturn companies in the US have reported an increase in property theft (+44%), fraud (+43%), violence (+27%) and IP theft (+7%). Campbell and Lefler (2009) also mentioned that "downturns produce more cases of embellished credentials or concealed substance abuse and financial problems". They classify employees' misconduct into two main categories:
- o   The insider threat (theft, fraud and violation of IP)
- o   Erratic behaviour : depression, anger, aggressiveness or even full-blown violence

The issue raised is could previous misconducts or lack of integrity shown by lying on his/her CV be predicators of future negative behaviours. Stravos (1998) has shown that looking at a potential employee's former employment, educational record, financial situation, and criminal record can reveal "red flags". Regarding for example credit checks, Gallagher (2006) has shown that employees with serious financial problems are thought more likely to steal. Oppler, Lyons, Ricks and Oppler (2004) found that federal employees who reported, either a bankruptcy, a legal judgment for unpaid debt, or a current loan delinquency of over 180 days were significantly more likely to engage in counterproductive

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[1] This increase in demand has led some high profile CEOs like John Sculley, former chairman of Apple and ex-CEO of Pepsi to create in 2005 a company (Verified Person) offering continuous employee screening to help companies prevent a bad hire and organizational misbehaviour.

work behaviour. Schnatterly (2003) looks more specifically at white-collar crime, which as the author stated can cost a company between 1 to 6 percent of annual sales. She concluded that the white-collar crime probability increases by 7% when a firm does not carefully screen its financial and audit staff. Empirical studies have shown some relationship between past behaviour and employee future misconduct. The following section introduces two theories that support the need for background verification.

II: THEORIES SUPPORTING BACKGROUND VERIFICATION

The two theories presented in this paragraph are the theory of reasoned action from psychology and the theory of asymmetric information from the economic field.

II.1: Theory of reasoned action

The Theory of Reasoned Action developed by Azjen and Fishbein (1980) states that intentions predict actual behaviour. The behavioural intention is determined by two factors: (a) the person's attitude towards the behaviour and (b) the subjective norms – the belief that other people approve of such behaviour. This theory is considered useful in explaining most social behaviours including functional and dysfunctional work-related behaviour. Vardi and Weitz (2002) have designed a study to test the Theory of Reasoned Actions in predicting employee intentions to engage in the three forms of employee misbehaviour as identified by Vardi and Wiener (1996), namely self-benefiting (Type S), organization-benefiting (Type O), or damaging (Type D). Their results support the Theory of Reasoned Action in predicting negative workplace behaviour: positive attitude toward misbehaviour and belief that other people support such behaviour are predictors of employee misconduct. We posit that the presence of inaccurate information on a CV or derogatory background information is evidence of the candidate positive attitude towards misbehaviour and could predict the intention to engage in organizational misconduct. In this context employee background verification is a form of preventive action designed to lower the chance to hire employee with a positive attitude towards misbehaviour.

II.2. Asymmetry of Information and Labour Market

The second category of theoretical model supporting the need for background verification is the theory of asymmetric information and market for lemons (Akerlof, 1970). Akerlof (1970) has demonstrated how asymmetric information could prevent transactions in the market for used cars and health insurance. In the labour market the same issue prevails. If we apply the principal-agent model to the labour market, there is an employer (the principal) and a job applicant (the agent). The job applicant has information about his/her skills level, attitude, knowledge. This information is not readily available for the employer. In order to solve this issue of asymmetric information economists propose two alternatives. A signalling alternative where job applicants get training that delivers some license. The signalling can also apply for past job experience. The *signalling* alternative can solve some of the problem of asymmetric information regarding the candidate skills. However as mentioned by Salop and Salop (1976) the information regarding the candidate productivity, trainability and expected tenure at the firm is not available through licensing. We can expand this list by adding information regarding work-related attitude. The firm needs therefore to develop some *screening*[2] device to acquire this information. Screening devices looking

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[2] Some economists use the terms signalling and screening interchangeably, and the distinction can be attributed to Stiglitz and Weiss (1989).

simultaneously at past work experience, educational records, and criminal records to name a few, are assumed to be correlated with the candidate future productivity, trainability and work-related attitude.

In the previous two sections we have reported two theories that support employee screening and some empirical works that have shown that some "flags" can predict future counterproductive behaviour. In the forthcoming section we develop a formula to measure ROI.

III. Return on Investment on Background Screening

The concept of Return on Investment (ROI) was first introduced in the early 1920s in the Harvard Business Review. It is a tool to measure the value created by an investment. ROI measures have been developed to estimate the return on training expenses (Phillips, 2005). The ROI of background verification corresponds to a dollar value measured as a ratio of costs divided by the benefits of conducting background verification. The benefits in dollar value are difficult to estimate as utility gains continue to accumulate over as many years as the person hired stays with the organization. The benefits can be measured as a difference in performance between a bad hire and good hire. We can state that a good hire will have a higher productivity than a bad hire due to the following factors:
- o A difference in output, measured for example by customer satisfaction
- o A difference in workplace morale and therefore productivity of co-workers. A bad hire could also lead to what economists called the effect of the "*bad money chasing the good one*", i.e., the good hire leaving because of the misbehaviour of the bad hire

In addition good hire will have a positive impact on the goodwill of the company that is its reputation on the consumer and labour markets. There are also intangible benefits that cannot be easily converted into monetary value, like job satisfaction, organizational commitment, teamwork.

In addition the company will have to incur some additional costs by hiring a bad hire
- o Cost of theft, fraud, sabotage
- o Cost of voluntary absenteeism. Phillips and Phillips (2005) report that the cost of voluntary absenteeism is often represented by a value in the range of one to three times the average daily wage rate.
- o Cost of accidents caused by a bad hire minus the cost of accidents caused by a good hire.
- o Value of management time spent on a bad hire minus the value of management time spent on a good hire.
- o Cost of terminating
- o Cost of recruiting the replacement of a bad hire
- o Cost of training the replacement of a bad hire
- o A bad hire could also open the employer to litigation for negligent hiring

To compute **ROI**, the following assumptions have to be made:
- o The salary for the bad or good hires is the same, w
- o The expected productivity of an employee, i.e, the value for the organization of a good hire is higher that the value for a bad hire. A good hire will have a value for the firm higher than his/her salary, w, called θ_g, and a bad hire will have a value lower than his/her salary, θ_b
- o The improvement in validity of the selection methods, $\Delta\alpha$, due to the use of a complete background screening (validity means how well a selection method predict a behaviour, in the

  case of background screening a change in validity means an increase in probability of hiring the right person).
  o Number of years a bad hire stays within a company, n_g
  o Number of years a good hire stays within a company, n_b

Based on these assumptions we have the elements to present the following formula to measure the ROI for background verification.

$$ROI = [w \ \times \ \Delta\alpha \ \times \ [(\theta_g - \theta_b) \times n_b + (\theta_g \times n_g)] / c ;$$

Where,
w = salary
$\Delta\alpha$ = increase in validity, i.e, increase in probability of hiring the right person
$(\theta_g - \theta_b)$ = value for the firm of a good hire versus a bad hire
θ_g = value for the firm of a good hire
n_b = number of year that a bad hire stays within a company
n_g = number of year that a good hire stays within a company
c = cost of conducting background checking

For illustration purpose, let's assume that a retail store is hiring a full-time entry-level employee. The salary of an entry-level employee is \$15000.

The second assumption is that a good hire represents an increase in value of 30% compared to a bad hire. We assume a difference of 30% as a good hire will be more productive than a normal hire and a bad hire will not only be less productive (decrease customer satisfaction) but the company will incur additional costs as mentioned earlier. We assume that a good hire is 10% more productive than an average employee and a bad hire represents a 20% increase in costs when adding the loss of productivity and additional costs.

The third assumption is that background screening tends to increase the probability of hiring the employee with the right attitude and skills, by 20%. It is reasonable to expect a complete screening process to remove the majority of the bad hires from the hiring pool, however it does not guarantee a 100% good hire. Background screening tends to eliminate applicants with important red flags: reference screening flags 20% of applicants, a criminal record check flags 6% of applicants, credit check flags 24% of applicants, and education verification flags 10% of applicants referenced (Bonanni, Drysdale, Hughes, & Doyle 2006). These percentages are also increased when the results of each of those checks are compared and cross referenced (Bonanni, Drysdale, Hughes, & Doyle 2006). Background verification can help measure a certain level of integrity of the candidate, however additional selection procedures are required to make sure that there is a proper match between the expectations of the candidate and the company.

Last assumption, good hires remain with the company for 5 years[3] and bad hires will remain with the company for one year at which point they will be terminated.

The first stage of our task requires that we calculate the cost of the investment. We will assume that the background screening package selected is relatively complete and includes a criminal record check, references, a credit check, and educational verifications. This package is more comprehensive than those

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[3] This assumption is in line with the conclusion in the report of the Bureau of Labor Statistics (2008) that on average an employee will change job 10 times in his/her career.

used by most companies (especially retailers) for entry level applicants. This package would cost approximately $200 in North America. This increases the investment to higher than what it would be normally, but it allows us to err on the side of conservatism and allows us to buffer our first assumption, which is that background screening always eliminates bad hire. The basic assumption that underlies the background screening industry is that the best predictor of future behaviour is past behaviour. As a result, it seems likely that a robust package as assumed here would be useful in predicting whether an applicant would perform well in a relatively simple job environment such as a full-time entry level retail position.

Having established the value of the investment and having established the assumptions under which we l build our equation, we can move on to measure ROI for background verification

$$ROI = [w \ x \ \Delta\alpha \ x \ [((\theta_g - \theta_b)/ w) \ x \ n_b + (\theta_g/ w) \ x \ n_g \ ] / c;$$

$$ROI = [\ \$15000 \ x \ .2 \ x \ ((.30) + (.10) \ x5)]/\$200$$

$$ROI = 2400/200$$

$$ROI = 12$$

This is the benefit/cost ratio or, put simply, the return is 12 times the investment. To sound even more impressive, it can be expressed as a percentage return on investment by multiplying by 100: 1,200 per cent.

This equation is fair, conservative even, when compared to contrasting figures. The US department of labour claims that "the average 'bad hire' that leaves a company within six months costs the company approximately $40,000 in severance pay, training, wasted human resource time, possible search firm fees, loss of productivity and impact on employee morale." Phillips & Phillips (2005) based on a survey conducted by the ROI institute have reported that the turnover costs, one of the consequences of bad hires, can represent between 30 to 50% of annual salary for an entry level fast food worker to 200 to 400% for a computer software designer. The estimated turnover costs are fully loaded to include all the costs of replacing an employee and bringing him or her to the level of productivity and efficiency of the former employee. Barada (2003) asserted that the costs for hiring the wrong person including costs for replacement and training are three times the annual income for that employee or $45000 for our hypothetical employee above. Sturman and Sherwyn (2009) measured the impact of integrity test (a selection device whose purpose is similar to background screening) on workers' compensation claims at a large hotel chain. Their conclusion is that company experienced a 50% one-year return on investment from the integrity test.

IV. Discussion

The formula presented in this paper has the advantage to take into consideration the double impact of background screening:

1. the positive impact on overall job performance of a good hire
2. the cost of counterproductive behaviour of a bad hire

Referring to Phillips (1996) model to measure ROI, the objective of this paper was to identify the needs and benefits of background verification. The next phase is to conduct a survey to gather data to estimate in dollars terms the benefits and additional costs (estimate the increase in job performance of a good hire and the cost of the counter productive behaviour of a bad hire). Accurate information regarding the costs

of a bad hire would be very useful for any HR managers, even if most of the costs are intangible. In order to conduct this study a survey is under development and will be sent to HR managers in France and Canada.

We are aware that the approach proposed necessitate gathering data that could be in some cases approximate. For example to measure the increase in productivity from a good hire we will use rationale estimates, defines as dollar value provided by supervisors (Schmidt, Hunter, McKenzie and Muldrow, 1979). Phillips & Phillips (2005) also support the approach of rationale estimates for estimating the cost of bad hires. They think that input concerning the actual impact of voluntary absenteeism, information concerning customer complaints, errors on reports, and conflicts may be developed from the immediate managers.

As the impact on individual costs and productivity have to be estimated by supervisors of the employees, we will conduct an additional study looking at the impact of background screening on companies total labour costs. The objective will be to compare labour costs of companies using background verification versus the ones not using background verification. We will propose to conduct a cross-sectional study and test the following equation:

$$\text{Log C} = \delta_0 + \delta_1 \text{xbackground} + \delta_2 \text{x average age of employees} + \delta_3 \text{ x percentage of white collars} + \delta_4 \text{ x percentage of women} + \delta_5 \text{ x number of employees} + \delta_6 \text{ x sector;}$$

Where,
Background is a dummy taking the value one if the company has done a complete background check and 0 otherwise
Sector is a dummy variable taking the value one if the company is in the tertiary sector and 0 if in the secondary sector (agricultural sector is excluded as this sector does not use background checking extensively).

By conducting this study we expect to validate our findings that background verification improves firms' performance either by increasing benefits or decreasing labour costs.

V. Future Research

This paper presents a methodology to measure the ROI of background verification. As stated earlier the next step is to gather data to validate our assumption that background verification helps firms to increase productivity and decrease labour costs. This paper is part of a larger research projects:

> ➢ As with any other selection/screening tool, it is important to guarantee that background verification does not discriminate potential employees based on age, gender or ethnic background.

> ➢ It is estimated that in excess of 50%[4] of persons hired within the US undergo some form of background screening process and that percentage is increasing year by year. It is estimated that approximately 30% of persons hired in Canada are similarly screened. In the UK, that number is estimated as being approximately 5%, while in Continental Europe the number is estimated to be less than 1%. The authors are interested in examining the reasons for the very different levels of

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[4] 82% of respondents in the US to a Society For Human Resources Management [SHRM] survey in 2004, indicated they conducted some degree of screening of potential employees.

screening in those various jurisdictions. The authors postulate several possible explanations for this international divide. The first is that the Background Screening industry was originally developed in the US and that the industry has simply not yet migrated completely into other business cultures. Another explanation could be that the legal and regulatory environment for Background Screening is more favourable in the US than to other jurisdictions. This may be because the legal culture in the US has caused more businesses to protect themselves from litigation by displaying due diligence. A third explanation could be that human resources professionals in other jurisdictions have different perceptions about the potential benefits of Background Screening.

➢ It would be also useful to evaluate job candidates' attitude towards a complete background check. We can expect privacy concern and stress associated with the lack of knowledge or control over information may generate negative reactions from the part of the candidates. A cross-cultural (French versus Canadian) study on this issue will be conducted.

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