JOURNAL OF BUSINESS ISSUES

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SAVING SOCIAL SECURITY: CAN IT BE DONE?

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Abstract: This study offers five possible solutions to the current inadequate funding of the Social Security System. Our findings indicate that any of the five proposals will prevent a future bankruptcy of the Social Security System, which is forecasted to occur in 2042. In addition, we find that private accounts and reduced traditional benefits, proposed by the Bush Administration, will not provide benefits comparable to the existing program. Maintenance of full benefits is critical for retiree self-esteem, as each dollar is essential for economic survival of the recipient. Any reduction in monthly benefits causes the average retiree great hardship. We demonstrate five methods by which the Social Security System maintains its benefits for retirees:
(1) Increase the 6.2% employee contribution rate;
(2) Raise the maximum wage limit for contributions above the current $94,200;
(3) Extend the full retirement age for those born after 1959 to age 70 or more;
(4) Divert part of the annual contributions into private accounts;
(5) Index benefits to the CPI rather than the national average wage index.

INTRODUCTION

The debate over social security reform became one of the main political issues in 2005. Unfortunately, it was swept under the proverbial carpet after being met with opposition from Congress as well as the majority of groups representing senior citizens. At present, Social Security reform is not receiving the media attention comparable to 2005; however, the reform proposals are back. Indeed, the President has included Social Security reforms in the 2007 Federal budget.

Although the Social Security system, as it currently stands, is solvent; a shortfall is projected by the year 2042.[1] Inflows into the system are expected to outpace outflows until around 2018. From 2018 to 2042, the shortfalls could be taken from the $1.5 trillion Social Security reserve "trust" currently held in U.S Treasury bonds. Beyond 2042, the current system would be unable to pay full benefits and it is estimated that benefits would need to be cut by about 30% unless taxes are raised. Therefore, while the Social Security system is clearly not in crisis at this time, it would be prudent to make some reforms in order to prevent the impending shortfall.

According to the Social Security Administration's Summary of the 2006 Annual Reports, "Social Security could be brought into actuarial balance over the next 75 years in various ways, including an immediate increase of 15 percent in the amount of payroll taxes or an immediate reduction in benefits of 13 percent (or some combination of the two)." Rather than completely revamping the system, the current administration has proposed making changes in the current system to keep it solvent for future generations. Our five proposals enable the Social Security System to remain solvent indefinitely without cutting benefits to any retiree; possibly retirement checks may be increased.

LITERATURE REVIEW

In this section, we summarize current literature regarding Social Security. Topics of recent articles include Social Security reform in general and Social Security privatization. Previous research has analyzed the risk and return of privatization versus the current program as well as the issue of transitional costs associated with Social Security reform.

Diamond and Orszag (2005) recommend reforming Social Security through a mixture of tax increases and benefit reductions rather than private accounts. The authors demonstrate how to restore the 75-year actuarial balance to Social Security with a three-part proposal. The first part makes adjustments for longer life expectancies with a combination of lower benefits and higher revenues. The second part involves increasing the maximum taxable earnings base subject to Social Security withholdings. The third phase concentrates on “universal legacy cost adjustments” to make up for past and current recipients receiving more in benefits than the revenues they contributed.

Contrary to Diamond and Orszag (2005), Feldstein (2005) believes that creating individual accounts is the preferred way to reform Social Security. He argues that shifting from the current pay-as-you-go system to a mixed system containing personal accounts can be accomplished without large tax deficits, tax increases, or benefit reductions. The caveat is that we must take action soon; otherwise, a significant tax increase will be inevitable because of the aging population.

Geanakoplos, Mitchell, and Zeldes (1998) discuss the issue of completely privatizing Social Security. They argue that if the system were converted to 100% private accounts, it would essentially become a defined contribution individual account system similar to an individual’s 401(k) account. This creates a problem for the Social Security administration in that a shortfall would arise regarding the payment of current benefits. The authors conclude that complete privatization does not pay a higher overall return to individuals because such returns must be offset by a tax increase necessary to pay benefits already accrued.

Arcurio (2004) also analyzes the issue of Social Security privatization. Arcurio aptly points out that privatization proponents have exaggerated the problems facing Social Security and therefore have presented the public with an unrealistic picture of the current state of the program. The author points out that although the system does need to be reformed because of an impending shortfall, privatization may cause more problems than it solves. Arcurio reasons that while social security privatization may result in higher rates of return, one cannot ignore transition costs, transaction costs, market risk, and liabilities to recipients.

Taulbee (2000) takes the analysis of privatization one step further. The author concludes that privatization may not be the best solution due to market risk, administrative costs, and increased taxes to pay accrued benefits. Taulbee proposes that a better solution may be to reform social security into a fully funded system instead of the current partially funded pay-as-you-go system. This means that benefits would be paid from the trust fund. Thus, current workers would no longer have to support current retirees. In addition, a fully funded system with a permanent trust fund would indicate an increased national savings rate that may result in future economic growth. The drawback to the fully funded approach is that is achieved through a combination of benefit cuts and tax increases.

Bosworth, Burtless, and Sahm (2000) analyze the distributional impact of social security reform through tax increases and benefit reductions. The authors conclude that low-wage

earners are better off if the existing pre-funded system is maintained rather than a move toward some type of individual account scenario.

Abel (1999) develops a tractable stochastic overlapping generation's model to analyze the Social Security trust fund. The author's findings indicate that if a portion of trust fund assets are shifted from bonds to risky capital, the expected income of the trust fund increases and can therefore be passed on to individuals. Of course the caveat to this scenario is risk involved which could ultimately result in lower than expected returns.

REFORM PROPOSALS

(1) Increase the 6.2% Employee Contribution Rate

The United States uses a forced savings plan for the retirement of its citizens. The employee contributes an amount, (6.2% of earnings up to a maximum of $92,400 for 2006), which is matched by the employer. Self-employed individuals must to contribute the entire 12.4% by themselves. The problem is to determine the correct prescription; how much should the contribution be to provide a reasonable retirement amount? Most retires think their Social Security checks are too low; however, Americans have the worst savings rate of any of the major industrialized, developed countries. Social Security payments are based on a very complex formula that depends on the number of years of contributions, the amounts contributed, and the time when the Social Security checks commence.

The 2006 Federal Insurance Contributions Act (FICA) contribution tax rate is 7.65% for employees, of which the Social Security system receives 6.2% on earnings up to the maximum amount of $94,200. These rates have not changed since 1990. Every time Congress or the President mentions increasing this amount, there are complaints about tax increases for businesses and employees with no regard toward the future. The exhibit below illustrates the historical Social Security tax rates from 1937 to 2005. As indicated by the chart, tax increases were fairly steady from about 1950 to 1990 and have remained level for the past 16 years.

Many functions that grow annually are now tied to the Consumer Price Index (CPI); as it changes (goes up) so does the allied function. This increase is called a "Cost of Living Adjustment" (COLA). Just as food and rent have increased in amounts over the years, an

individual's savings percentage should also increase. If the retirement contribution rate is set to grow at the same rate as the CPI increases, the long-term (over 40 plus years) accumulated dollar amounts are staggeringly higher. The long-term CPI average inflation rate from 1982 to 2004 is 3.24%. By 2017, when a crisis point for the Social Security System occurs, the contribution rate per employee will be 8.53%, as shown in the table below. When the cash flowing into the Social Security System reaches a stable amount for the duration, the increasing contribution rate can be slowed or stopped. Using a sample employee base of 50 to 60 million individuals, Thaler and Benartzi (2001) calculate that a one percent increase in employee savings becomes $250 million in annual contributions and a five percent increase becomes $125 billion per year. If 100 million workers increase their contribution rates in the ensuing twenty years, the Social Security System will never run out of money, and the monthly retirement paychecks can be increased for each retiree.

Year	Contribution Rate	Year	Contribution Rate
2007	0.0620	2017	0.0853
2008	0.0640	2018	0.0880
2009	0.0661	2019	0.0909
2010	0.0682	2020	0.0938
2011	0.0704	2021	0.0969
2012	0.0727	2022	0.1000
2013	0.0751	2023	0.1033
2014	0.0775	2024	0.1066
2015	0.0800	2025	0.1101
2016	0.0826	2026	0.1136

Since this increase in contribution percentage does not affect the employer's contribution percentage, the employer should not complain that the increase in tax would affect his or her business. Further, the employer should support this plan because it will provide an adequate retirement income for the firm's employees. In addition, the employer must take a lead role in educating younger employees about the absolute necessity of starting and maintaining a retirement program. The additional funds for investment will greatly enhance America's future growth.

The only person who might complain about the aforementioned systematic contribution increase is the employee who will contend that he or she cannot afford to save any more money. Since the increase in contribution rate will be very slow, the individual should never miss the money. Policy makers should explain that these small increases will be matched by increases in retirement checks and prove to the individual that the Social Security system now has a solid foundation upon which the retiree can rely on in the distant future. Shifting the retirement burden toward the employees is less onerous if the reciprocity between contributions and benefits is stronger. Employees must be convinced that the increased payments are essential to their financial well being in retirement.

(2) Raise the Maximum Wage Limit for Contributions Above the Current $94,200

In 1937, at the inception of the Social Security System, the contribution wage limit was $3,000. In 2006, the wage limit amount is $94,200. The table below illustrates the historical Old Age and Survivors Disability Insurance (OASDI) maximum annual wage limits subject to contributions.

History of the OASDI contribution and benefit base

Year	Amount	Year	Amount	Year	Amount
1937-50	$3,000	1981	$29,700	1996	$62,700
1951-54	3,600	1982	32,400	1997	65,400
1955-58	4,200	1983	35,700	1998	68,400
1959-65	4,800	1984	37,800	1999	72,600
1966-67	6,600	1985	39,600	2000	76,200
1968-71	7,800	1986	42,000	2001	80,400
1972	9,000	1987	43,800	2002	84,900
1973	10,800	1988	45,000	2003	87,000
1974	13,200	1989	48,000	2004	87,900
1975	14,100	1990	51,300	2005	90,000
1976	15,300	1991	53,400	2006	94,200
1977	16,500	1992	55,500		
1978	17,700	1993	57,600		
1979	22,900	1994	60,600		
1980	25,900	1995	61,200		
Note: Amounts for 1937-74 and for 1979-81 were set by statute; all other amounts were determined under automatic adjustment provisions of the Social Security Act.					

Source: http://www.ssa.gov/OACT/COLA/cbb.html

On May 9, 1977, President Jimmy Carter, in a message to Congress, indicated the Social Security Trust Funds were critically short of funds; expenditures exceed income; and existing reserves will soon be exhausted. President Carter asked for continuing increases in the wage contribution base to prevent exhausting the Old Age and Survivors Insurance (OASI) Trust Fund by 1983. The Carter administration thought that these actions would provide a significant source of revenue without increasing long-term benefit liabilities and would eliminate the deficit for the remainder of the century and would reduce the 75-year deficit.

Thirty years later, the American people are still concerned about the long-term “survivability” of the Social Security system. The continual increase of the wage cap over the

next 20 years at the average rate of increase over the past 30 plus years will add enough billions to keep the Social Security system operational indefinitely. However, eliminating the wage cap and becoming 100% taxable in one year constitutes largest tax increase in a single year in history. Immediately, high earners, who would find their taxes at 50% of income, would consider reasons to quit or reduce working. This cascade effect reduces spending on household items. For example, a physician might reduce his weekly hours from more than 65 to 40. The result is shrinkage in the Social Security wage base. America's economy loses more than it gains by eliminating the wage cap in one year. The solution is a gradual increase in the wage cap. Although the Social Security system is a progressive benefit system that gives low wage earners a larger return on their contributions than high earners, an effort should be made to compensate higher wage earners a more fair return for the contributions made over a lifetime.

The Social Security wage contribution increases from 1972 to 2006 reflect an average increase of 6.54%. Using this percentage as a growth factor for the next 20 years, the wage cap increases to $356,646 by 2027. Assuming the FICA has a total tax of 12.4%, the Trust Fund collects an annual contribution of $44,224 in 2027 from each taxpayer in this bracket.

Year	Contribution Wage Base	Tax Collections
2007	100,365	12,445
2008	106,934	13,260
2009	113,933	14,128
2010	121,390	15,052
2011	129,334	16,037
2012	137,799	17,087
2013	146,818	18,205
2014	156,427	19,397
2015	166,665	20,666
2016	177,573	22,019
2017	189,195	23,460
2018	201,578	24,996
2019	214,771	26,632
2020	228,827	28,375
2021	243,804	30,232
2022	259,761	32,210
2023	276,762	34,318
2024	294,876	36,565
2025	314,175	38,958
2026	334,737	41,507
2027	356,646	44,224

Authors' Calculations

The defense of the Social Security system is critical to the vast majority of individuals over the age of 45. Most of them will die before they reach 75, and many will want to retire no later than 65. No one wants to worry about whether or not the Social Security system will remain in existence. Over the last half century, the rates and wage base have gradually increased to maintain solvency of the system. The Social Security system is pay-as-you-go retirement system that transfers money from working individuals to retirees. This type of system requires adequate sources of funding to finance the future benefits retirees. Every year we wait makes the problem worse to fix because the Social Security deficits are growing faster than the payroll tax base.

(3) Extend the Full Retirement Age for Those Born After 1959 to Age 70 or More

In a report to the Senate Committee on Aging on June 3, 2003, longevity charts evidenced that human deaths have greatly declined in the past 100 years, especially in infant mortality and ages below 65. The cost implication is severe. For two decades, Congress was told that the pay-as-go system will not support retirees in the future and that the Social Security system must be placed on a sound financial basis. The ratio of people over 60 years has grown rapidly. The number of employees in the labor force in this age group has almost doubled since 1960. The problem is that the baby boom is a baby bust combined with increasing life expectancies, which results in a falling ratio of workers to beneficiaries. This multiplier of events is pushing the Social Security system to insolvency. Even if the United States of America absorbed all of Latin America (Mexico included), the retirees would eventually overwhelm the system. Population growth from young foreigners and immigrants simply postpones the inevitable. Life expectancy of people with higher earnings and more education has grown faster than the life expectancy of those with lower earnings and less education. This increasing gap in life expectancy adds to Social Security's financing deficits since higher earners collect benefits for an increasingly larger number of years relative to lower earners.

When the Social Security system was enacted during the Roosevelt administration in 1935, the retirement age was set at 65. At that time, most Americans died before age 65. Today, men and women can easily live into their 70's and 80's. Many people reasonably expect to live into their 90's or 100's. Depending on your sex, nationality, race, and many other factors, the average life expectancy of a 65 year old in 2022 is 16 years or 81, and in 2080, it is 21 years or 86 (Manton, Gu, and Lamb, 2006). Slowing the growth in the Social Security liability occurs by increasing the normal retirement age to 70 as soon as possible. If the longevity trends are reasonable, the normal retirement age in 2022 should be 72 and in 2080, it should be 77.

Mandatory or compulsory retirement age requirements must be eliminated from all areas of endeavor; everyone should be entitled to work as long as they desire. Job advertisements referring to a "young and dynamic person" must be changed to "ability, experience, and skills for the task." The age discrimination regulations must include a wider enforcement level to ensure that employees over 70 are provided with complete access to any job for which they might be qualified. Extensive research has shown a strong correlation between employee satisfaction, customer satisfaction, and the successful operation of any business. Older employees increase customer satisfaction. Everyone should have the choice when he or she wants to retire. Eventually, the concept of retirement will disappear as humanity routinely lives beyond 100 years.

Regarding women in particular, growing numbers of them are continuing to work either fulltime or part-time well into their 60's. Women should not face age bias because they interrupted their careers to raise families. Unfortunately, women of this age group have not had the level of income of men of comparable age; therefore, women need the additional income to sustain their economic status.

A change in the nation's laws is needed to encourage individuals to continue to work beyond normal retirement age. [2] Many categories and occupations of workers, such as law enforcement officers, firefighters, and air traffic controllers face mandatory retirement because of out-dated laws. The nation's air traffic controllers have a mandatory retirement age of 56. Federal Aviation Administration rules also mandate that pilots of large commercial aircraft retire by the time they turn 60. Our laws need to reflect the changing demographics of our workforce. Because of the desire of the government to maintain a younger workforce in these occupations

and because of job requirements, no changes have been encouraged by any group. Some studies indicate that while experience is beneficial for air traffic controllers, younger controllers have higher performance levels than older (over 50) controllers. Mental and physical tests for each individual should be the determinative factor, rather than some arbitrary date that forces a healthy person out-of-work. Some economists have supported mandatory retirement concepts because older workers may not contribute as much to productivity compared to younger workers.

Japan's official retirement age at medium and large companies is 60, even for top executives, which is close to the lowest among the G7 countries.[3] However, most Japanese men generally continue to work until almost age 70, and the average retirement age of women is only a few years younger. In addition, older workers sometimes continue to work for their current employer at reduced compensation levels.

Social Security actually encourages psychological retirement. The Social Security Administration subjects the wages of people under 65 to a retirement earnings test, which reduces a person's benefits if they make too much money. Returning to work after claiming Social Security retirement benefits may cause a reduction in your retirement payments if you have not reached full retirement age. That law should be changed, as it is counterproductive. In addition, Medicare should to be reformed to act in conjunction with employer health insurance plans. Since Medicare becomes available at 65, health insurance companies can lower the premiums for older employees.

For 2006, Social Security benefits are subject to an earnings limit of $12,480 if you are less than full retirement age. Your payments are reduced $1 for every $2 you make over the limit. The year a person reaches full retire age (FRA), only $1 is deducted for every $3 earned above the limit of $33,240, until the month you reach full retirement age. Only then, can a person work without any reduction in monthly benefits. The "Senior Citizens' Freedom to Work Act of 2000" eliminated the Social Security annual earnings test after a person attains full retirement age.

By not stopping the full retirement age at 67 in 2027 and by continuously increasing the age to 71 or higher every few years, the Social Security system would accumulate so much money that the anticipated shortfall of funds would be covered. Indeed, on March 7, 2005, Senator Hagel of Nebraska introduced a bill increasing the Social Security retirement age from 67 to 68 in 2023. To date, an increase in the full retirement age beyond 67 has not been enacted. A failure to correlate the retirement age with the increase in longevity is equivalent to reducing the maximum wage base limit.

(4) Divert Part of the Annual Contributions into Private Accounts

According to the Workers with Maximum-Taxable Earnings table, the Social Security benefits for a retirement at 65 are $1,367; the currently promised benefits for 2042 are $1,746 and the benefits for 2075 are $2,032. Many factors enter into the Social Security calculations, which can cause the monthly dollar amounts to vary. The Bush Plan provides that 4% of the 12.4% contribution amount be shifted from the Social Security System to a Private Retirement Account Plan (PRA). Under the Bush Personal Account Plan, the average monthly Social Security payment would be in the hole -$86 per month in 2042 and -$417 per month in 2075. The rate of return to avoid benefit cuts under the Bush Plan is 7.19% for 2042 and 6.04% for 2075. The cuts in the SS benefits are balanced by higher returns from the PRA. The returns from U.S. Treasuries are inadequate to fund the future benefits.

A high, medium, and low risk plan for the PRA offers the individual a choice for their retirement funds. The low risk plan is U. S. Treasury Bonds, which has an average return of 2.70% from 1926 to 2004. The medium risk plan is a weighted composite of large company stocks (50%), AAA corporate bonds (25%) and U.S. Treasury Bonds (25%), which has an average rate of return of 6.08% from 1926 to 2004. The high-risk plan is large company stocks, using the Dow Jones composite or the Standard & Poors 500, which has an average return of 9.25% from 1926 to 2004.

A private or personal retirement system allows greater flexibility, various choices, and investment alternatives. The benefits are never taxed under the Social Security FICA tax, neither are the contributions to such plans nor the distributions from such plans subject to Social Security taxes. Using a very complicated formula, the IRS charges only a minor amount of income tax to the individual.

A sampling of options are set forth in the Table of Investments below: rates of return (4% to 11%), amounts invested per year ($1,000 to $10,000), and the number of years for the investment period (25 to 50). Obviously, the table may be extended for a wider range of variables. The compounding effect for a 20-year old at 10% for 50 years who saves only $2,000 per year is an amazing $2,327,817. Any individual retiring with that much money will have sufficient capital to live comfortably the remainder of his or her lifespan. Unfortunately, for the 45-year old, not even saving $10,000 per year will equal the 20-year old's nest egg. For all older age groups, (age 55 and older), these individuals would remain in the existing Social Security System and receive its benefits. For younger individuals, the money invested in the PRA belongs solely to them. Consequently, they are subject to investment risk. Furthermore, individual Social Security system benefits are reduced by these contributions.

Table of Investments

	Expected Return (future value) for 20-year old - various investment rates						n =	50
Amounts	4%	5%	6%	7%	8%	9%	10%	11%
1,000	152,667	209,348	290,336	406,529	573,770	815,084	1,163,909	1,668,771
2,000	305,334	418,696	580,672	813,058	1,147,540	1,630,167	2,327,817	3,337,542
3,000	458,001	628,044	871,008	1,219,587	1,721,310	2,445,251	3,491,726	5,006,313
4,000	610,668	837,392	1,161,344	1,626,116	2,295,081	3,260,334	4,655,634	6,675,085
5,000	763,335	1,046,740	1,451,680	2,032,645	2,868,851	4,075,418	5,819,543	8,343,856
6,000	916,003	1,256,088	1,742,015	2,439,174	3,442,621	4,890,501	6,983,451	10,012,627
7,000	1,068,670	1,465,436	2,032,351	2,845,703	4,016,391	5,705,585	8,147,360	11,681,398
10,000	1,526,671	2,093,480	2,903,359	4,065,289	5,737,702	8,150,836	11,639,085	16,687,712

	Expected Return (future value) for 25-year old - various investment rates						n =	45
Amounts	4%	5%	6%	7%	8%	9%	10%	11%
1,000	121,029	159,700	212,744	285,749	386,506	525,859	718,905	986,639
2,000	242,059	319,400	425,487	571,499	773,011	1,051,717	1,437,810	1,973,277
3,000	363,088	479,100	638,231	857,248	1,159,517	1,577,576	2,156,715	2,959,916
4,000	484,118	638,801	850,974	1,142,997	1,546,022	2,103,435	2,875,619	3,946,554
5,000	605,147	798,501	1,063,718	1,428,747	1,932,528	2,629,294	3,594,524	4,933,193
6,000	726,176	958,201	1,276,461	1,714,496	2,319,034	3,155,152	4,313,429	5,919,831
7,000	847,206	1,117,901	1,489,205	2,000,245	2,705,539	3,681,011	5,032,334	6,906,470
10,000	1,210,294	1,597,002	2,127,435	2,857,493	3,865,056	5,258,587	7,189,048	9,866,386

	Expected Return (future value) for 30-year old - various investment rates						n =	40
Amounts	4%	5%	6%	7%	8%	9%	10%	11%
1,000	95,026	120,800	154,762	199,635	259,057	337,882	442,593	581,826
2,000	190,051	241,600	309,524	399,270	518,113	675,765	885,185	1,163,652
3,000	285,077	362,399	464,286	598,905	777,170	1,013,647	1,327,778	1,745,478
4,000	380,102	483,199	619,048	798,540	1,036,226	1,351,530	1,770,370	2,327,304
5,000	475,128	603,999	773,810	998,176	1,295,283	1,689,412	2,212,963	2,909,130
6,000	570,153	724,799	928,572	1,197,811	1,554,339	2,027,295	2,655,555	3,490,956
7,000	665,179	845,598	1,083,334	1,397,446	1,813,396	2,365,177	3,098,148	4,072,782
10,000	950,255	1,207,998	1,547,620	1,996,351	2,590,565	3,378,824	4,425,926	5,818,261

	Expected Return (future value) for 35-year old - various investment rates						n =	35
Amounts	4%	5%	6%	7%	8%	9%	10%	11%
1,000	73,652	90,320	111,435	138,237	172,317	215,711	271,024	341,590
2,000	147,304	180,641	222,870	276,474	344,634	431,422	542,049	683,179
3,000	220,957	270,961	334,304	414,711	516,950	647,132	813,073	1,024,769
4,000	294,609	361,281	445,739	552,948	689,267	862,843	1,084,097	1,366,358
5,000	368,261	451,602	557,174	691,184	861,584	1,078,554	1,355,122	1,707,948
6,000	441,913	541,922	668,609	829,421	1,033,901	1,294,265	1,626,146	2,049,537
7,000	515,566	632,242	780,043	967,658	1,206,218	1,509,975	1,897,171	2,391,127
10,000	736,522	903,203	1,114,348	1,382,369	1,723,168	2,157,108	2,710,244	3,415,896

	Expected Return (future value) for 40-year old - various investment rates						n =	30
Amounts	4%	5%	6%	7%	8%	9%	10%	11%
1,000	56,085	66,439	79,058	94,461	113,283	136,308	164,494	199,021
2,000	112,170	132,878	158,116	188,922	226,566	272,615	328,988	398,042
3,000	168,255	199,317	237,175	283,382	339,850	408,923	493,482	597,063
4,000	224,340	265,755	316,233	377,843	453,133	545,230	657,976	796,084
5,000	280,425	332,194	395,291	472,304	566,416	681,538	822,470	995,104
6,000	336,510	398,633	474,349	566,765	679,699	817,845	986,964	1,194,125
7,000	392,595	465,072	553,407	661,226	792,982	954,153	1,151,458	1,393,146
10,000	560,849	664,388	790,582	944,608	1,132,832	1,363,075	1,644,940	1,990,209

	Expected Return (future value) for 45-year old - various investment rates						n =	25
Amounts	4%	5%	6%	7%	8%	9%	10%	11%
1,000	41,646	47,727	54,865	63,249	73,106	84,701	98,347	114,413
2,000	83,292	95,454	109,729	126,498	146,212	169,402	196,694	228,827
3,000	124,938	143,181	164,594	189,747	219,318	254,103	295,041	343,240
4,000	166,584	190,908	219,458	252,996	292,424	338,804	393,388	457,653
5,000	208,230	238,635	274,323	316,245	365,530	423,504	491,735	572,067
6,000	249,875	286,363	329,187	379,494	438,636	508,205	590,082	686,480
7,000	291,521	334,090	384,052	442,743	511,742	592,906	688,429	800,893
10,000	416,459	477,271	548,645	632,490	731,059	847,009	983,471	1,144,133

(5) Index Benefits to the CPI Rather than the National Average Wage Index.

The Bush Administration has proposed changing the index upon which Social Security benefits are calculated from the National Wage Index (NWI) to the Consumer Price Index (CPI).

Historically, the NWI has grown faster than the CPI. Therefore, switching to the CPI reduces the long-term benefits of the retiree. Of the five proposals to ensure the solvency of the Social Security system, changing from the NWI to the CPI is the only one that appears to reduce the retiree's benefits. This method mathematically reduces benefits unless the CPI exceeds the NWI, which historically has been the opposite.

A comparison of the average and standard deviation for the CPI and the NWI reflects a greater increase in benefits using the NWI compared to the CPI. Although small differences are evident, the NWI would be more helpful for the retiree living solely on Social Security.

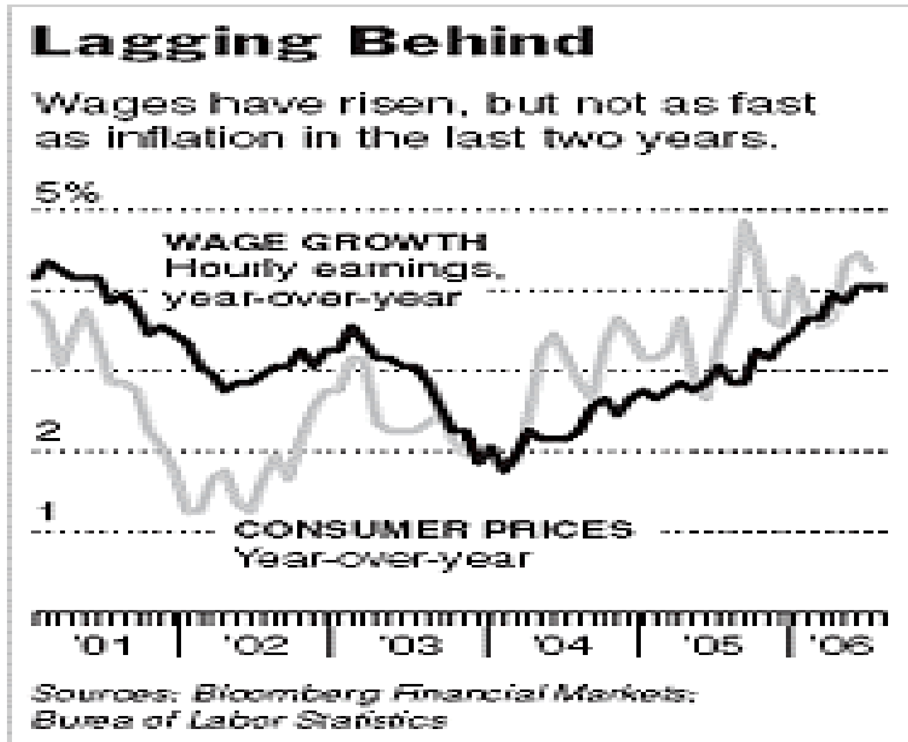
NWI from 1951 to 2004: Average change	4.67%
Standard deviation	1.97%
CPI: Average inflation rate: 1912 to 2004	3.39%
Standard Deviation	5.06%
CPI: Average inflation rate: 1982 to 2004	3.24%
Standard Deviation	1.18%

Source: http://www.ssa.gov/OACT/COLA/AWI.html

Philosophical differences are a factor in choosing one index over the other. Should retirement benefits be tied to the changes in prices or the changes in wages? Both benchmarks keep pace with the basic necessities such as food, shelter, etc. With NWI, the retiree receives a greater benefit. The analogy is an insurance policy for your home; you receive the replacement cost for your house upon loss or destruction versus your automobile policy, which provides the actual (mystical or "blue book") value, but not another vehicle. Munnell and Soto (2005) compare the CPI and NWI and calculate wage growth versus growth in prices beginning from 1951 to 2003. The authors assert an increasing spread with NWI outgrowing the CPI and claim that the annual Social Security benefits would be reduced by over six thousand dollars per year. The objective in using an index is to maintain the retiree's standard of living when confronted by inflation and living on a fixed income, not to reduce it.

According to Hobijn and Lagakos (2003), the NWI has been consistently higher than the CPI. Continuing to use the NWI causes the Social Security system greater risk of insolvency. The authors find that inflation is higher for senior citizens because of higher medical expenses and Medicare costs. The dilemma is to ensure the purchasing power of retirees versus the solvency of the Social Security system.

During the past few years, the gap between the NWI and the CPI has narrowed. As the chart below indicates, the CPI has exceeded the NWI in growth from 2000 to date. Whether this trend will continue is unknown since the data is insufficient to draw a meaningful conclusion, other than a contrary perspective.



When you retire and ask the Social Security Administration (SSA) for a check for the rest of your life, your lifetime earnings are analyzed to determine an Average Index of Monthly Earnings (AIME). A maximum of 35 years of earnings is used to compute the AIME; you must have worked for at least 40 quarters (10 years), in which you paid into the Social Security system, to be eligible for benefits. SSA selects the years with the highest earnings and divides by the total number of periods. Interestingly, the SSA rounds down to the next lower dollar amount. Your earnings are added up and divided by 420 (35 years times 12 months), which is your individual AIME.

Next, the SSA calculates a Primary Insurance Amount or percentage, which is the sum of three separate percentages of portions of AIME. This amount is the benefit a person receives if he or she retires at the normal retirement age. This age for people born in 1937 or earlier is 65 and is age gradually increased to 67 for people born later than 1960.

For an individual who first becomes eligible for benefits in 2006, his/her PIA will be the sum of:

(a) 90 percent of the first $656 of his/her average indexed monthly earnings, plus
(b) 32 percent of his/her average indexed monthly earnings over $656 and through $3,955, plus
(c) 15 percent of his/her average indexed monthly earnings over $3,955.

Therefore, the AIME and PIA factors are very progressive by protecting low-income earners because the factors shrink as the AIME increases.

To adjust for inflation, the SSA applies the NWI to calculate the “bend points” that Congress added in the 1970s to the formula. This aspect alone is the proposed adjustment by

the Bush Administration. Any changes in the index have strong consequences for the individual as well as society in general.

CONCLUSION

Attitudes towards saving for retirement can be changed by society's efforts. A half century ago, Americans were ordered to wear seat belts. They didn't like it, even though many studies confirmed that seat belts saved lives. Today, people who do not fasten their seat belt automatically are told by their passengers to buckle up. The same analogy will be true in 40 years for the Social Security system. As a solvent, successful program that pays sufficient monthly checks for a reasonably comfortable living, the American public will believe in the long-term prospects of the Social Security System. Every American (young or old) will know that the Social Security System is solvent indefinitely and that their current and future paychecks are secure. Any of the five methods discussed in this paper will completely fund the Social Security System indefinitely. The optimization of these five methods remains for future analysis.

ENDNOTES

[1] Source: Social Security Administration, Office of the Chief Actuary.

[2] The Age Discrimination in Employment Act, 29 United States Code 623 states that it shall be unlawful for an employer —

> (1) to fail or refuse to hire or to discharge any individual or otherwise discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's age;
> (2) to limit, segregate, or classify his employees in any way, which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's age.

[3] The G7 counties include Canada, France, Germany, Japan, Italy, the United Kingdom, and the United States.

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FORENSIC ACCOUNTING AND AUDITING UNITED AGAIN: A HISTORICAL PERSPECTIVE

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Abstract: This paper is a historical review and commentary on the relationship of forensic accounting and auditing. In the early years of the accounting profession, when fraud discovery was acknowledged as being one of the principal objectives of the financial audit, forensic accounting was an integral part of mainstream accounting. During subsequent decades as the accounting profession attempted to distance itself from fraud discovery responsibilities, forensic accounting became identified as a specialized subset of the profession. Now, on the heels of many embarrassing corporate failures and passage of the Sarbanes-Oxley Act, forensic accounting is being reunited with the profession. Fraud discovery is again acknowledged as one of the principal responsibilities of the auditor and the tools of the forensic accountant are now being rediscovered.

In 1909, Robert Montgomery, one of the founding fathers of the American accounting profession, stated, "[t]he detection of fraud is a most important portion of the auditor's duties, and there will be no disputing the contention that the auditor who is able to detect fraud is – other things being equal – a better man than the auditor who cannot" (p. 12). At the time, this was not a radical or unorthodox position. In fact, Montgomery's statement was the conventional wisdom of the era, emblematic of professional expectations transplanted to America from the United Kingdom.

In subsequent decades, however, conventional wisdom evolved to the point that American auditors denied primary responsibility for fraud detection. They relegated fraud discovery to the status of incidental by-product of an audit whose purpose was to render an opinion on the fairness of presentation in accordance with generally accepted accounting principles. Fraud investigation was abandoned to a specialized subset of the profession - "forensic accountants" - who were deemed to be better qualified for the task.

The public at large--current and prospective shareholders, creditors, and other beneficiaries of public companies--never accepted the accounting profession's denial of responsibility for fraud discovery. Tenaciously, the public clung to its belief that the auditor's primary responsibility was the discovery of fraud. The accounting establishment dismissed this belief as uninformed and unreasonable, given the complexities and limitations of the annual financial statement audit. Millions of dollars and untold numbers of man-hours were expended by the AICPA in a futile effort to reduce what the profession insisted was an unrealistic "expectations gap." Aspiring accountants were indoctrinated by the profession's authoritative literature into an unquestioning acceptance of the "expectations gap." Aspiring auditors were taught that fraud discovery was only an incidental responsibility of the profession.

Thus accounting sought to deny that which the market demanded. Leaders stubbornly refused to acknowledge the problem was not an expectations gap but a performance gap. But the profession was unable to educate the public out of its ignorance. In the long run, the market view prevailed.

The long run has now arrived. In recent years, auditors have come under intense pressure to be better fraud detectors. They must rediscover their lost forensic skills and embrace the century-old vision of Montgomery and his professional colleagues. In this new climate, forensic accounting has boomed and forensic accountants are being drawn back into the professional mainstream.

The re-emergence of forensic accounting is a reunion of long-separated strands of auditing, a return to common roots. A brief review of history will make this clear. But first, it is worthwhile to define forensic accounting and what it has become in its long exile from auditing.

FORENSIC ACCOUNTING – WHAT IS IT?

In 2004, the American Institute of Certified Public Accountants (AICPA) declared that the definition of forensic accounting is "unclear" (AICPA Forensic and Litigation, p. 4). And so it is. In recent years, usage has changed rapidly as the field has exploded in prominence.

Generally speaking, forensic accounting services are used in the legal system (Coppolla, 2006, p. 17; Dorrell, 2000, p. 7; Durkin & Harry, 1997; Hochberg, 2006, p. 3; Telpner & Mostek, 2003, p. 41; Bologna, 2000, p. 2; Huber & Glenn, 2005, pp. 3-4, 9; Carmichael et al., 2002, pp. 1-13) or in another adversarial context. Litigation services and investigative accounting are the two main branches of forensic accounting, according to some experts (Crumbley, 2005, p. 45; Coppolla, 2006). But Jack Bologna, editor of the *Forensic Accounting Review*, points out that "fraud auditing, forensic accounting, litigation support, investigative accounting, and valuation analysis are often used interchangeably" (1994, p. 1; see also 1996, pp. 5-6).

What is at the heart of all the services coming under these names is a search for fraud. Whether the professional is evaluating a business for bankruptcy, conducting an insurance investigation, searching for hidden assets in a divorce proceeding, or investigating the revenue recognition procedures of a publicly-traded company, the fear of fraud is what drove his hiring. He is expected to detect fraud if it is there.

Fraud detection specialties, whether called "forensic" or not, are a booming business today (Gardyasz, 2005; Kahan, 2006; Anonymous, 2006; Telpner & Mostek, 2003, p. v). Large accounting firms have forensic specialty units. New textbooks are being published to serve the growing number of courses being taught in forensic accounting. It is even possible to earn a master's degree in forensic accounting.

CLASSICAL AUDITING: FRAUD DETECTION AS IT ONCE WAS

Today's spotlight on fraud detection is nothing new. Up through the early 20th century, auditors were expected as a matter of course to search for fraud (Albrecht et al., 2006, p. 610). In 1905 and 1909, Lawrence Dicksee and Robert Montgomery wrote that the "object and scope of an audit" consisted of three items. Number one was the "detection of fraud" (Dicksee, 1905, p. 22; Montgomery, 1909, p. 12). These books by Dicksee and Montgomery were the basis of the prestigious series *Montgomery's Auditing*, the standard auditing work of the 20th century (Zeff, 1987, p. 49). Robert Montgomery himself was a giant in early American accounting, a founder of one of Price Waterhouse Coopers' predecessor firms and of the AICPA (Zeff, pp. 46, 49).

This view of the auditor's job appeared everywhere in the early literature. A 1918 pamphlet, for example, published by the LaSalle Extension University declared that the

"detection [of frauds] is one of the most important functions of the professional accountant." (Benington, p. 3). This included financial statement fraud: investors and creditors should "insist upon an investigation of such financial condition in their behalf by competent auditors" who could detect fraudulent manipulation (p. 29).

NEO-CLASSICAL AUDITING: THE NADIR OF FRAUD DETECTION

Beginning in the early decades of the last century, American accountants, collectively and singly, fled fraud detection (Albrecht et al., 2006, p. 610; Commission on Auditors' Responsibilities, 1978, pp. 33-35). Many attributed the flight to a litigious climate in which the most common alleged fault was the auditor's failure to detect a fraud (Jaenicke, 1977, p. 80 and *inter alia*). Auditors sought to immunize themselves from professional liability by issuing professional pronouncements that minimized or denied professional responsibility for fraud discovery. By the mid-point of the century, authoritative professional pronouncements avoided even using the word "fraud," preferring discreet euphemisms like "irregularities." The "expectations gap" was identified - the difference between what auditors on one hand and the rest of the interested world on the other, thought an audit could accomplish in the way of uncovering fraud.

Nevertheless, auditors continued to find plenty of auditing work. Creditors, after all, still demanded audited financial statements, and the Securities Act '33 and Securities Exchange Act '34 still required that public companies be independently audited. Meanwhile, businesses and other entities that seriously suspected fraud hired special forensic investigators to search it out. These specialists concentrated on what they were hired to do: sniff out defalcations and identify the perpetrators (see, e.g., Pratt, 1952, 1956). Financial statement fraud fell through the cracks, although everyone knew it was more important than asset fraud (see, e.g., Benington, 1918, pp. 22-23; Beasley et al., 1999, pp. 22, 24). After all, the accounting profession was unwilling to accept primary responsibility for discovery of fraud. And management had little incentive to investigate itself. In effect, fraudulent financial reporting, the most insidious, damaging, and costly species of fraud, was orphaned by denial.

NEW ERA AUDITING: THE REVIVAL OF FRAUD DETECTION

An unrelenting series of embarrassing audit failures over the last 50 years has prompted a paradigm shift in accounting. In the mid-20th century, when the flight from fraud detection was at its height, a few observers predicted this change. Harvard's R. Gene Brown, for example, wrote in 1962 in the *Accounting Review* that in the future "there will be acceptance of the general responsibility of the auditor to perform tests to detect material defalcations and errors if they exist. This will be incorporated as a supplementary audit objective" (p. 703).

Brown's was a lonely voice at the time. It was more than a decade before the AICPA set up the Cohen Commission to study auditors' responsibilities and the gap "between the performance of auditors and the expectations of the users of financial statements" (Commission on Auditors' Responsibilities, 1978, p. xi).[1] The Commission's 1978 report approached its central topic of fraud so delicately that the word "fraud" appeared nowhere in its four-page introduction. The text of the report was a little bolder. Chapter 4 was called "Clarifying Responsibility for the Detection of Fraud" and listed a number of "recommendations on a standard of care for fraud detection" (pp. 37-40). SAS 16, issued in 1977 in conjunction with the Commission's work, also preferred euphemism: its title was "The Independent Auditor's Responsibility for the Detection of Errors and Irregularities" and even in the text "fraud" was seldom used.

From this reluctant beginning, driven always by financial scandals and outraged public reactions, authoritative bodies began re-introducing auditors to fraud detection. In the mid-1980s, the Treadway Commission was set up to study the subject by a prestigious group of organizations: the AICPA, the American Accounting Association, the Financial Executives Institute, the Institute of Internal Auditors, and the National Association of Accountants (National Commission on Fraudulent Financial Reporting, 1987, p. 1). The Treadway group concluded that "the ability of the independent public accountant to detect fraudulent financial reporting is related directly to the quality of the audit" (p. 49).

The Treadway Commission spawned nine new auditing standards in 1988 (Apostolou et al., 2000, p. 183). Dubbed the "expectation gap standards" at an AICPA conference a few years later (*Expectation Gap*, 1993), these standards still avoided any emphasis on the "fraud" word. SAS 53, for instance, just modified SAS 16's euphemistic title slightly. However, the substance of the pronouncement was more straightforward. Auditors were now required not just to search for fraud but to detect it (p. 107).

The pace of change increased in the late 1980s and 1990s. The *CPA Litigation Services Counselor* newsletter began publication in 1989, an example of the new emphasis on fraud in the professional literature. In 1993, the Public Oversight Board admitted that "the users of audited financial statements must obtain some measure of additional assurance that … management is not manipulating its financial reports or committing other frauds" (*Special Report*, p. 33, emphasis in the original). Jack Bologna, in his *Forensic Accounting Review* newsletter, declared that "the responsibility for detecting fraud is now generally assumed by outside auditors in the usual course of an independent audit" (1996, p. 1). In 1997, the AICPA finally put the word "fraud" in the title of a statement of auditing standards: SAS 82, "Consideration of Fraud in a Financial Statement Audit."

An avalanche had begun to cascade downward. Study after study came out showing how large the problem of financial statement fraud was and how attentive the public is to the detection role of auditors (e.g., Beasley, 1999, pp. 23-24, 48-49; Sinason & Pacini, 2000; Apostolou & Crumbley, 2005, citing surveys by KPMG, PricewaterhouseCoopers, Comico Mutual Insurance, and the Association of Certified Fraud Examiners in 2003 and 2004). Sinason and Pacini concluded that "SAS No. 82 only establishes minimum standards for external auditors. CPAs are now held to a higher standard" (2000, p. 231).

That higher standard was issued in 2002: SAS 99, "Consideration of Fraud in a Financial Statement Audit." The next year, the AICPA published a 300-page guide on "Financial Reporting Fraud: A Practical Guide to Detection and Internal Control" with a 16-page how-to checklist (Lundelius). The *Journal of Accountancy* began a regular feature, "The Fraud Beat." A new *Journal of Forensic Accounting* began publication in 2000. Universities and professional bodies began offering innumerable courses in forensic accounting.

It was too little, too late. Public outcry and indignation flowing from the Enron meltdown, WorldCom implosion, and other well-publicized business failures radically changed the landscape. In the past, the AICPA had been remarkably adroit and successful in fending off critics of auditor performance. After every embarrassing debacle, the AICPA offered up a new innovation in self-regulation that would assure that it would not happen again. And yet it did—over and over again.

As a result, the accounting profession is no longer master of its own destiny. Congress passed the Sarbanes-Oxley Act (2002), which removed much of the profession's powers to

oversee itself and to set its own standards. The Public Companies Accounting Oversight Board (PCAOB) became the regulator for auditors of public companies. In 2005, the PCAOB cautioned the profession that financial fraud is a priority and existing audit standards will be strengthened still more in the future (Rankin). Melvyn Weiss, "one of the country's premier class-action litigators, particularly in the areas of accounting and securities fraud" ("Weiss to CPAs", 2005, p. 3), warns accounting firms wishing to avoid litigation to "focus on their original purpose, which is the detection and prevention of fraud," (p. 36).

FORENSIC ACCOUNTING AND AUDITING – TOGETHER AGAIN

On the heels of Enron, Tyco, WorldCom, HealthSouth, and a host of other lesser debacles, auditors are now setting about to do that which they so fervently asserted they could not be depended upon to do--discover the existence of fraud. What seemed old and unfashionable a few decades ago is now avant-garde. Effectively, auditors find themselves becoming forensic accountants--again. In a revival of old practices that has been building for many years, they now agree with what Dicksee and Montgomery said a century ago: auditors' "research for fraud should therefore be unwearying and constant" (Dicksee, 1905, p. 22).

There is still a ways to go to avoid further Congressional attention. Forensic accounting and auditing are only just re-discovering each other's competencies, and both need to improve their handling of financial statement fraud. A recent handbook on corporate fraud by Joseph Wells, founder of the Association of Certified Fraud Examiners (Zwirn, 2005, p. 73), for instance, devotes only 80 of its 430 pages to fraudulent financial statements (Wells, 2004). A forensic accounting textbook "for non-experts" devotes its entire attention to asset misappropriation, except for one passing reference to financial statement fraud (Silversone & Sheetz, 2004). Certainly, as Wells pointed out in a 2005 interview, accounting students need more "anti-fraud training in college" (Zwirn). And research in fraud detection techniques is sorely needed, too. We do not even know, for example, if the commonly-used "red flag" approach to fraud detection actually works (Albrecht et al., 2001, p. 10).

But at least it is now commonly acknowledged that the work of the auditor and that of the forensic accountant are quite similar (Pagano & Buckhoff, 2005, p. 19; Brazina, 2006, p. 25; Silverstone & Sheetz, 2004, p. 82). As experienced arson investigator Jeffrey Salins said in 1998: "You should understand from the beginning that there is very little difference in the actual work the CPA performs in an arson case and the kind of work performed by CPAs on a regular basis. It is financial analysis …" (p. 3). As a result, the professional literature now routinely mingles its advice to auditors and forensic accountants (e.g., Sinason & Pacini, 2000; Apostolou et al., 2000; Apostolou & Crumbley, 2005).

Today, fraud discovery is acknowledged as a principal objective of the audit, as Robert Montgomery originally said it was. However, Montgomery was right about something else, too: auditors are not insurers of the financial statements (1909, p. 4). Auditors are not asked to do a forensic audit. Conducting a true forensic audit as a matter of routine is not a realistic undertaking. A forensic audit would be both prohibitively expensive and extraordinarily time consuming, and would still be less than 100% effective in discovering all incidences of fraud.

Fortunately, the objective is not perfection – just marked improvement in fraud discovery, accomplished at reasonable cost. Discovering the largest and most egregious incidences of fraud is achievable at reasonable cost within the normal time constraints of the annual audit. However, achieving this result will require a change in both auditor mindset and fieldwork evidence gathering.

The long-standing position of the profession holds that auditors should be neutral, but professionally skeptical. In reality, management is presumed to be honest unless there is compelling persuasive evidence to the contrary. To have success in discovering fraud, auditors must alter this mind set and accept the premise that management is both capable and willing to do whatever is necessary to accomplish its goals.

In 2000, the Panel on Audit Effectiveness (established by the Public Oversight Board at the behest of the SEC) issued a report calling for auditors to "modify the otherwise neutral concept of professional skepticism and presume the possibility of dishonesty at various levels of management including collusion, override of internal control, and falsification of documents" (pp. 88-89). In light of performance pressures on management, assuming management honesty seems a particularly naïve and imprudent proposition to defend. While the majority of management teams may be honest, there is much evidence that not all are. Users of financial statements are ill-served when auditors assume that management is honest. The public interest is best served by a vigilant auditor whose attitude is more consistent with “trust, but verify.”

Auditors must remember that they are not advocates of the reporting entity. In fact, the reporting entity is not really their client, although they are appointed by and compensated by the reporting entity. The role of the independent auditors is to represent the interests of absentee stakeholders who rely on financial statements to guide their decision processes. Current and prospective shareholders and creditors are the real client.

Unfortunately, too frequently management is perceived and treated as the de facto client who is to be accommodated and kept happy --- if at all possible. Absentee stakeholders have no physical embodiment on the corporate site; they are not present in the conference room; they do not go to lunch, dinner, or golf with the auditor. Nor do they offer the allure of lucrative later employment opportunities. And most of all, absentee stakeholders do not issue the checks to the independent auditors. As a result, and contrary to the theoretical ideal, auditors are often seduced into perceiving management to be the client. Auditors are complimented when they are made to feel “part of the team.” This is an alluring trap that compromises professional independence and objectivity. Auditors are not supposed to be part of the team; it is poisonous to their function as protector of absentee stakeholders.

To correct this problem, the Sarbanes Oxley Act (SOX) put its faith in internal controls. When SAS 99 was issued in 2002, Joseph Wells pointed out that although he had helped write it, it “concentrates way too much on attempting to detect fraud and not nearly enough on trying to prevent it from occurring in the first place” (Zwirn, 2005). Others agreed, so SOX obliged companies to emphasize internal control heavily as the best hope to prevent fraudulent financial reporting and foster renewed confidence in the financial reporting system.

SOX has had a number of unintended consequences. First. SOX raises the bar on the minimum defensible investment in internal control. In the post-SOX era, executives are motivated to “trim the tree” with what may be excessive investments in internal controls so that they may argue a persuasive good faith effort defense. Predictably, the result has been a significant increase in the flow of investment capital—capital that might otherwise have flowed to investments in new productive assets, product research and development, or distributions to shareholders—into control measures. The biggest cost of increased internal control is the opportunity costs - products are not developed, productive facilities not built, jobs not created. Given the realities of global competition, the US economy can ill afford to be handicapped with a self-inflicted wound.

A second unintended result of SOX is that companies are voting with their feet against the burdens of compliance. Publicly traded companies, particularly small companies, elect to go private to avoid SOX compliance costs and private companies elect to stay private. International companies choose to list their securities on foreign exchanges as opposed to US exchanges.

Third, the limitations of internal control cannot be over-emphasized. While internal controls are effective at reducing employee level fraud, such frauds are not the most damaging. Preventing and detecting management fraud is the problem. It should be noted that Enron and other companies that suffered disastrous frauds had excellent internal control system, systems that arguably met SOX requirements. And yet, internal controls failed to prevent fraud. Some argue that what we need is more investments in internal control—but perhaps more of the same is not the answer.

Perhaps we should consider the path not taken – more old-fashioned detailed audit work. The report of the Panel on Audit Effectiveness recommended that auditors incorporate an element of surprise into audits. This is hardly a novel recommendation; it is commonly advised where fraud detection is the goal (see, e.g., Pratt, 1956, p. 13). But when SAS 99 was issued, the Panel recommendations had been watered down and reduced (Apostolou & Crumbley, 2005, p. 106). SAS 99 focuses on risk assessment; it does not require forensic procedures.

For thirty years or more, audit firms have rationalized doing less as "auditing smarter." Auditors use statistical sampling and computerized audit software to test internal controls, and use their findings as a justification for avoiding the traditional "down and dirty" tests of details and balances approach. Auditors visit fewer inventory locations—trusting the system and those who control it by doing a sample—send out fewer accounts receivable confirmations—sending out confirmations only to material accounts and ignoring those that are individually immaterial, and rely on client employed specialists as opposed to retaining their own. To facilitate a "smooth, orderly" audit and keep management happy, auditors coordinate much of their fieldwork with the reporting entity—and thus sacrifice the element of surprise. To move work out of their traditional year-end busy season, auditors focus much of their audit efforts on interim periods and use this as a basis for reducing the amount of year-end testing. To reduce audit labor costs, audit firms leverage their seasoned, experienced professionals by spreading them thinly and giving them too many inexperienced new hires to supervise. Audit firms rely upon inexperienced aspiring professionals to do most of the heavy lifting on an audit engagement and then compound this by putting staffers under intense performance pressure to make time budgets. Abandoning these practices in favor of more substantive audit procedures is the only way to achieve better fraud detection.

THE GOOD AND THE BAD

Notwithstanding the demanding internal control provisions of SOX and what we hope will be an increased auditor emphasis on fraud discovery, there will continue to be notable instances of fraud. It is unrealistic to think otherwise. Corporate executives confront unrelenting performance pressures to make projections, budget, or earnings hurdles. Their personal wealth is tied directly to reported performance. As long as this is true, there will be motivation for fraud and financial misstatement. So we should not be surprised that on occasion fraud is found to exist, even after an unqualified financial statement opinion is issued. This is not to be taken as prima facie evidence of incompetence, negligence, or dishonesty on the part of the auditor.

What can and should change is the focus and overall quality of the audit as a fraud

detection tool. After decades of denial and protestations of incompetence, auditors are now in the position of rising to the fraud challenge as a matter of necessity. If the profession does not respond well to the challenge, its continued professional existence in its present role may be in question. The public is unlikely to be tolerant of more cases like Enron and WorldCom. The next round of reform measures enacted by Congress is likely to be exceedingly unpalatable to the accounting profession.

Increasing the auditor's mandate for fraud detection is likely to have some predictable consequences, both undesirable and desirable. First, audit costs will increase. Some cost increases will be attributable to "defensive auditing." Just as physicians are said to practice "defensive medicine," auditors are likely to perform both more extensive and costly audit procedures with a view toward building a persuasive legal defense that they did all they might be reasonably expected to do to discover fraud. Going the "extra mile" increases audit costs, perhaps beyond an economically defensible point. Some marginal firms, particularly those not subject to securities registration requirements, will elect not to be audited.

On the plus side, acknowledging responsibility for fraud detection and being more aggressive and skeptical in performance of the audit procedures is likely to bear fruit and eliminate the most blatant instances of fraud. Fraud deterrence is certainly in high demand in recent years (Anonymous, 2006; Kahan, 2006). As the profession's attitude continues to change, some deterrence will undoubtedly occur. This will foster increased confidence in the financial reporting process. Public confidence is a sensitive thing, easily destroyed by fraud and only slowly recovered (see, e.g., Farber, 2005, p. 539). So leery is the public of financial statement fraud, indeed, that stock prices will fall for companies whose *auditors* are involved in a lawsuit, especially if the lawsuit involves the possibility of fraud (Sinason & Pacini, 2005). Thus the public imperative of doing more to detect fraud.

Another benefit of the revival of fraud detection is that it adds value to the auditor's work. After all, the market will not forever pay for services that are, in its view, beside the point. Harvard's Gene Brown warned of the low value of audits that do not test for fraud in the middle of the 20th century, when fraud detection was at its nadir (1960, p. 702). But Lawrence Dicksee, British author of the books on which Montgomery's *Auditing* series were based, voiced the same warning in the far more colorful language of the late 19th century:

> The responsibility involved in certifying a Balance Sheet to be absolutely correct is so great, so limitless, that many have preferred … merely to certify a Balance Sheet as being 'in accordance with the books.' Auditors, however, will hardly require to be reminded that an investigation which had been limited to the comparison of a Balance Sheet with the books would be, for every purpose, absolutely valueless … It would appear, therefore, that the Auditor who does not consider his investigation has been sufficiently searching escapes no liability by issuing a carefully modified certificate: and indeed, such a course is decidedly unmanly, somewhat dishonest, and exceedingly childish. (1892, pp. 150-151)

So in the end, the profession has come full circle. Having expelled forensic accounting from its original home in auditing a century ago, auditors are now bringing it back again. We're all fraud detectors now. Or, as Robert Montgomery might have said: the best among us are fraud detectors.

ENDNOTES

[1] See also Beasley et al., 1999, for an account of the development of fraud-related standards.

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WHAT DO WESTERN MANAGERS NEED TO KNOW BEFORE DOING BUSINESS IN INDIA? HUMAN CAPITAL IMPLICATIONS FOR THE CHANGING ECONOMY OF INDIA

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Abstract: As India has grown to become one of the world's largest democracies and economies, more U.S. firms and venture capitalists look to it as a place to develop investment opportunities and organizational expansion. Traditionally, such decisions were based on marketing and financial strategies, with human capital factors receiving less attention. In contrast, we examine these investment decisions by first discussing common Western assumptions about India and exploring the influence of national culture on management and human resource practices. We then provide practical advice on building human capital and innovation for organizational leaders considering investment in India as a strategic option.

India remains an attractive investment option for U.S. firms, with venture capitalists selecting India as one of their top investment opportunities (www.nvca.org, 2005). U.S. total direct investments reached a record high of $3.7 billion in 2002 and organizations locating operations in India have witnessed tremendous growth. For example, in just four years GE's Bangalore operation grew to employing 1,800 engineers, 25% of whom have Ph.D. degrees. Similarly, Texas Instrument's Bangalore location employs 900 engineers who have 225 U.S. patents. It is estimated that there are now more information technology (IT) engineers in Bangalore than Silicon Valley (150,000 vs. 120,000; Kripalani & Engardio, 2003).

But high-tech firms are not the only ones reaping the benefits of India's growing economy. For instance, in 2003, about 25,000 US tax returns were completed in India; in 2004, that number rose to 100,000 and in 2005, it is expected to jump to 400,000 (Friedman, 2005). Companies including American Express and JP Morgan Chase & Co. are employing Indian workers to assess applicant risk for insurance policies, credit card applications, and mortgages. Many organizations have outsourced work to India, reporting a 40-60% cost savings. In 2004, Reuters employed a staff of 300 in Bangalore to write news bulletins, finding the wage and rent costs in India to be approximately one-fifth of those in London or New York (Friedman, 2005).

Other organizations have recognized increased efficiency by outsourcing to India. U.S. banks now process mortgage applications in three hours rather than three days by employing workers in India. Many small and medium sized U.S. hospitals are outsourcing the reading of CAT scans to "nighthawks" in India, thus providing 24/7 service. Many hospitals and physicians outsource their medical transcriptions to India. Because of the twelve-hour time difference, workers in India transcribe the reports while the U.S. workers sleep, so that the completed reports are ready when the U.S. employees arrive to work the next day (Friedman, 2005). India continues to make strong inroads into the biotechnology, pharmaceuticals, entertainment, and healthcare industries (Kripalani & Engardio, 2003; Kapur & Ramamuri, 2001), causing some to believe that India is the new Asian tiger (Banks & Matarajan, 1995).

Although Western organizations are flocking to India, many companies have little understanding of the Indian people and their complex culture. Some organizations, such as Dell

Inc., have withdrawn operations from India, while others have complained about inconsistent quality, communication problems, and struggles with bureaucratic and political red tape. India is a country of vast contrasts. Despite its wealth of well-trained engineers and IT workers, as well as the commitment of the Indian government to quality and compulsory education which includes the presence of 229 universities and many distance learning opportunities, India's literacy rate and per capita income are low (Yadapadithaya, 2000). About 40% of homes lack electricity. Highways have not kept pace with India's rapid economic growth and pollution causes an estimated 10 deaths per day (Javalgi & Tallui, 1996; Kripalani & Engardio, 2003).

To assist Western organizations considering investing in the India, we examine three prevalent misconception about India. Given India's long history of isolationism followed by her rapid economic expansion brought in part by the Internet, it's hardly surprising that false assumptions about her culture, people, and resources abound. Western managers who hold these misconceptions often make costly mistakes in their decision making regarding India. After discussing these common misconceptions, we use research, organizational studies, and first hand accounts to make recommendations about how three essential human resource management (HRM) functions—recruitment, selection, and retention; performance appraisal and rewards; and training and career development—can be strategically developed so that Western companies may gain a competitive advantage and more effectively manage human capital in India.

COMMON MISCONCEPTIONS ABOUT INDIA

Under British rule, India traded openly, especially with the United Kingdom. After her independence from Great Britain on August 15, 1947, India chose isolationism, remaining highly self-protective and closed to world trade for more than 30 years.

However, the success of economic reforms in neighboring Asian countries provided strong incentive for some of India's leaders to champion a more open door policy. Throughout the 1980s and 1990s, India evolved into a more free-market economy (nationalgeographic.com, 2004). In the early 1990s, the Indian government made it easier for firms to set up their own satellite downlink. While firms in India still experienced difficulty making phone calls across town, such downlinks enabled firms to now connect with partners across the globe. The dotcom boom increased India's connection to the world through a network of fiber-optic cable. Next came the Y2K scare, which required the services of trained IT specials to do the tedious tasks of updating systems and prevention crashes. Who else but India had both the trained workforce and the volume of workers needed to defeat the so-called millennium bug? As the Y2K work ended, international companies had established strong collaborative relationships with Indian firms. Witnessing first-hand the quality of the Indian workforce, Western outsourcing of jobs increased (Friedman, 2005). Today, India has become a leader in the production of knowledge workers and has earned the nickname of the "world's back office" for the great amount of outsourced work which is completed there (Kriplanai & Engardio, 2003).

Despite the opening of India's society and economy, Western managers continue to carry many misconceptions about the country and her people. It is important, however, that Western managers understand the culture of India and how social and cultural elements shape business and human resource management policies. We will examine three common myths about India that could impede Western firms interested in investing in India. These common assumptions are: (1) India is composed of a homogenous culture, (2) India is very similar to other former British colonies, and (3) India is the new China.

Assumption #1: India has a homogenous culture.

Reality: India is a country of great cultural diversity.

Many Westerners are unaware of India's great political, religious, and cultural diversity. For instance, India has 45 political parties, with approximately 100 other strong, unregistered parties (Alon & Bian, 2005). The country has 17 official languages, with at least 800 regional dialects. Politics, culture, dress and even diet may vary from one of India's 26 states to another. Although 81% of India's population practices Hinduism, India has one of the largest Muslim populations in the world (126 million). Most western managers have little knowledge of the religions-—including Buddhism, Jainism, and Sikhism, practiced in India (Kripalani & Engardio, 2003; Kumar & Thacker-Kumar, 1996; Limaye, 1998; nationalgeographic.com, 2004).

One reason for India's great cultural diversity is its large rural population coupled with a historic lack of infrastructure. India covers a geographic area which is about one-third the size of the U.S., but it has a poor system of highways and roads in many areas. The lack of highways, especially in the mountainous regions, prevents India's people from readily traveling and communicating with one another, even with neighboring villages which may be only a few miles away. Because villages are isolated, the individuals living there often become a tightly bonded group, even developing their own subculture and dialect. Such a variety of subcultures and dialects can be difficult for Western managers to understand. Many expatriate managers are either inadequately or improperly prepared for living and working in India. For example, the managing director of Goodyear India learned some Hindi before departure, but was posted in Madras where the most common language was Tamil (Kumar & Thacker-Kumar, 1996). Because of wide regional differences, Westerners with experience in one of India's 26 states may find relatively little of their experiences transferable when working in another part of the country.

Western companies must avoid the trap of assuming India is a relatively homogenous culture. Lack of awareness of these intra-country differences, especially political differences, can result in costly blunders. India's states function more like the member countries in the European Union than the states in the U.S. and thus often have more say about business operational policies in their region than does the national government (Limaye, 1998). As the states continue to seek greater power and autonomy, Western companies need to realize that the opinions of local leaders are important and must be taken into account. Western companies must avoid even the slightest appearance of meddling in India's political system. In the early 1990s, Enron made the mistake of becoming too entangled in India's politics. Enron gained the support of the Congress party for a major project. The party, however, lost the upcoming election and the new ruling government canceled the deal, putting Enron back to square one (Javalgi & Tallui, 1996; Limaye, 1998). Enron failed to realize how powerful local politics are and had picked the wrong state to invest in, resulting in years of delay in their project and the loss of millions of dollars. Enron's blunder illustrates the need to maintain informal ties with all-important parties, not just the currently ruling one. Because of regional differences, it is important that Western companies ensure that the location they choose to operate in is the best match to their needs. Some states are less bureaucratic and more open to Western businesses (e.g., Maharastra and Gujarat) than others (Ramachandran, 2000). In sum, because of these many intra-country differences, Western companies may wish to hire consultants, partner with Indian companies and/or hire Indian-born professionals to help them navigate the country's many cultural, religious and regional differences.

Assumption # 2: We all speak English and are former British colonies, so we must be alike.

Reality: Although there are similarities, India and the former British colonies are often more different than similar.

Managers from countries including the U.S., Canada, and Australia that share a British legacy, may incorrectly assume that their similarities with India are greater than they actually are. For instance, many are surprised to learn that research examining dissimilarities between the US and other countries, has found that the U.S. and India have among the highest levels of cultural differences. Usually the greater the dissimilarities between countries, the more difficult it is for expatriates to be successful because of the greater adjustments needed to learn and fit into the culture (Mendenhall & Oddou, 1985; Sullivan & Tu, 1993; Tu & Sullivan, 1994).

Along what lines do India and Western countries differ? Although Indians in business settings speak English, there are differences in usage and slang between the British English used in India and the less formal American English. As Edward Altman, director of TCS America's media and entertainment practice, reported, some U.S. leaders experience difficulty understanding their Indian colleagues' accented English. To better understand the culture and to more easily connect with his Indian colleagues, Altman sought out a mentor to assist him in the acculturation process. Others, like Stephen Pratt, CEO of Infosyst Consulting, have also noted some difficulties in communicating with their Indian colleagues. Pratt reported that he often relies more on the written word rather than verbal communications, sometimes sorting through stacks of email messages when he gets confused (Dai, 2004).

In addition to the relatively minor differences in language—that nonetheless can occasionally lead to misunderstandings, there are other differences in communication styles between India and Western countries. For instance, instead of saying "no" to a business deal, many Indians repeatedly stall a decision, hoping the other party will drop the issue. Moreover, because Indians tend to explain behaviors in terms of social roles, obligations, physical environment, and other contextual factors, their behavior may seem inconsistent to outsiders. Westerners who typically explain behaviors based on traits may perceive contextually based behavior and decisions as irrational or confusing (Mellahi & Guermat, 2004). Likewise, Indians often find the behavior of Westerns to be bewildering. Many Indians believe that Westerners, especially American men, speak and act too aggressively. Many Indians view time differently than those in the West, seeing Westerners as lacking patience and respect for tradition (Hofstede, 1980 & 1993; Limage, 1998).

Another major difference that Westerners find perplexing India's caste system. India's caste system has been embedded in its culture for over 1500 years. There are four main groupings or varnas (Brahmans, Kshatriyas, Vaisyas, Sudras), with each varna containing hundreds of hereditary castes and subcastes, each with its own rules. There is also the untouchables or Dalit (oppressed) group, who are outcasts and shunned (nationalgeographic.com, 2004). Westerners who venture outside the normal tourist and business centers will quickly notice the vast differences in living conditions between the "have" and "have nots" (author, personal observation, January, 2005). Although discrimination based on caste was abolished in 1947, on a practical level such caste differences still influence business and other practices (Javalgi & Tallui, 1996), especially in rural areas. Another difference is that India tends to have a collectivist culture, whereas Western countries tend to have individualistic cultures. In general, India's cultural characteristics include submissiveness,

belief in fate (karma), clan orientation with in/out group distinctions, adherence to hierarchical authority, lack of time urgency, and caste distinctions (Amba-Rao, Petrick, Gupta & Von der Embse, 2000; Hofstede, 1980 & 1993; Mellahi & Guermat, 2004). Indians tend to be motivated by duty (dharma) toward their family and life roles rather than intrinsic work motivation and achievement (Amba-Rao et al, 2000). In contrast, Western countries tend to focus on decentralization of authority, time urgency, and the desire for objective, merit-based rewards (Hofstede, 1980 & 1993). Indians often view U.S. management practices as too aggressive, inflexible, market-driven and lacking social concerns. In contrast, Indians may perceive British managers as having a greater understanding of the Indian culture due to their long term association (Amba-Rao et al, 2000). The culture in India retains a belief in power distance in which power may be distributed based on political, caste, group, and bureaucracy in a form of "power myopia" as well as low tolerance for the unknown. Indian managers tend to prefer stability and job security (Budhwar & Sparrow, 2002).

Western firms marketing products in India have quickly come to recognize the great differences between Western and Indian cultures. Philip Morris's attempt to place its orange Tang as a breakfast drink in India failed because the company didn't recognize differences in Western and India beliefs about food. Although Americans tend to drink fruit juices in the morning, many Indians drink tea with milk in the mornings and believe mixing milk and citrus creates a sour mood and is bad for the stomach. Similarly, while Americans tend to be loyal to brands, trying only two brands of the same product per year, Indians switch brands often, trying on average six brands of the same product per year (Ramachandran, 2000). In sum, because of these many differences, Western firms often enter into joint ventures with Indian firms in order to obtain guidance from these local partners who better understand the Indian culture and government system.

Assumption #3: India is the new China.

Reality: Although both India and China are in Asia, organizations should consider investing in each of them for different reasons.

Because China and India are the two most highly populated nations in the world and both are located in Asia, Western investors often view them as similar and inter-changeable when making location decisions. On closer observation, however, it becomes apparent that these two Asian countries offer completely different types of investment environments. There are three key differences between the two countries.

First, India has inherited a multiparty social-democratic government system from Britain. Their complicated web of political parties, provincial governments, and central government results in a regulatory system that is almost impossible for Western companies to navigate. In China, the central government has traditionally served as a power-broker for influential regional fractions. Recently, the new generations of China's central government leaders have demonstrated their ability to exercise extensive control over the provincial powers, thus creating an even more centralized system. Although inconsistencies in laws and corruption still exist in China (Aon & Bian, 2005), this centralized system has made it easier for Western managers to deal with the government (Srinivasan, 2004).

Second, India has many well trained engineers and professionals. India's technical and engineering schools are well known and their educational system continues to grow and improve, in part because of investments by Indians living abroad. India's educational system is extremely selective and only a privileged few may go to the universities. Because of India's

huge population, this small percentage of graduates translates into a big number. In comparison to China, most Indian business people speak English. Also, India has a younger population, with 53% of the population under the age of 25, compared to 45% in China (Kripalani & Engardio, 2003; Javalgi & Tallui, 1996). Like India, China has a relatively large pool of young and energetic workers. However, China's educational system is not as well developed and continues to be rebuilt after the devastating destruction of the cultural revolution (i.e., a youth movement orchestrated by Chairman Mao to regain his diminishing power that unsettled the whole country, disrupting many systems, including education and the economy). Whereas Western companies tend to look to India for knowledge and professional workers, they tend to look to China for its cheaper manufacturing and service labor, earning China the nickname as "the world's manufacturing base." Moreover, while there is a history of Chinese youth leaving their family and traveling great distances in search of job opportunities, India's younger workers are more reluctant to leave their families to find jobs. Also, because China's infrastructure is more developed than India's, it is easier to travel around China than India. Because it is easier for workers to relocate, companies operating in China need to offer salaries that are nationally rather than regionally competitive. Recently, for example, Chinese workers migrated en mass to the Shanghai region because of its higher pay level.

Third, because of India's initial delay in economic reform and the political struggles causing her to flip-flop on decisions in the early periods of these reforms, India is at an earlier stage of economic development than is China (Srinivasan, 2004). India is still in the process of developing into an export economy and as a location for the service industry. In contrast, China has a better developed infrastructure (e.g., highways, electric and other power, and superior industrial parks) than India, with China's exports being four times greater than India's. Foreign investment in China is over $50 billion a year compared to $4 billion in India. China has reached double-digit GDP growth over the last decade compared to India's 6% growth rate (Kripalani & Engardio, 2003). China has enjoyed a huge trade surplus for several years and is currently the largest consumer of raw materials (e.g., steel, cement, aluminum, oil). However, India has recently gained some economic ground on China because of the SARS epidemic that negatively affected China's exports to other countries (Saran & Guo, 2005). In sum, while both countries offer tremendous opportunities for Western companies, they are not inter-changeable and must be evaluated based upon their unique strengths and weaknesses.

STRATEGIC INITIATIVES FOR INDIA

India is a unique and complex country and Western managers who don't act upon erroneous assumptions about it can recognize wonderful growth opportunities there. One way in which companies may gain a competitive advantage in India is through integrating their strategy with appropriate strategic HRM programs and policies. Because many Indian managers have been trained at Western universities, numerous Western HRM practices have already been adopted in India. In addition, Indian organizations recognize the relevance of HRM to business success (Budhwar & Baruch, 2003). A survey of 252 Indian organizations found that they were concerned with HR issues including: skill enhancement, knowledge building, attitude change, adjustment to change, developing a total quality mentality, and creating a cohesive organizational culture (Yadapadithaya, 1999 as reported in Yadapadithaya, 2002). Yet, a more recent study which compared Indian and British managers found that participative management, training and greater inclusion of personnel in strategic initiatives were comparatively new for Indian managers Budhwar & Sparrow, 2002).

Western companies operating in India should be aware that the local environment can have an important impact on HRM practices (Budhwar & Baruch, 2003). For example, in India

there are a large number of laws regulating business practices such as those that make it difficult to fire employees. The work culture tends to promote low productivity because in the past the government emphasized the use of human labor rather than machines and technology. Most labor unions are linked to political parties so many politicians are former labor leaders and have strong labor biases which creates some militancy on the part of the labor force (As-Saber, Dowling & Liesch, 1998). Given the impact of the local environment, it is important than Western managers examine how HRM programs can be altered to better match the situation in India. In the next section, we will examine how essential HRM functions can best be implemented to fit the unique culture and complexities of India.

RECRUITMENT, SELECTION, AND RETENTION

From a selection standpoint, having a pool of qualified knowledge workers to choose from is becoming a problem in India. Each year, India's universities produce 3.1 million college graduates, 260,000 of whom are engineers (Kipalani & Engardio, 2003; Ramamurti, 2001). Not only do Indian universities produce a large number of knowledge workers, but much pre-screening has already been completed by the university system itself. For example, for every 100 applicants it receives, The Indian Institutes of Technology (IITs) admits just one student (Kapur & Ramamurti, 2001). The government does not interfere with the IITs' demanding curriculum and workload. There is no way around the rigorous admissions criteria, with many saying it is harder to be accepted by the ITTs than by Harvard or MIT in the U.S. (Friedman, 2005). India is continuing to increase the number of engineering colleges as well as striving to enhance its overall higher educational system. The newly formed Indian School of Business has links with such well-regarded Western programs as the Wharton School and Northwestern's Kellogg Graduate School (Kipalani & Engardio, 2003). Western firms can quickly realize cost-savings by employing these well-trained, disciplined employees. Top chemical or electrical engineering graduates from the Indian Institutes of Technology earn approximately one-eighth the comparable U.S. starting salary (Kipalani & Engardio, 2003). However, since the 1990s, competition for well-educated labor in India has intensified, with some of India's industries (e.g., technology, telecommunications, pharmaceuticals) beginning to experience labor shortages (Grossman, 2006). Although India has responded to these shortages by increasing the number of engineering schools, their graduates are not of consistently high quality. There are some concerns that such rapid expansion of educational programs, especially private ones, may reduce the quality of India's labor force (Sengupta, 2006).

Given this changing situation, Western companies in India should, therefore, focus on ways to attract and retain their highly qualified workforce. Consequently, many Western firms have entered into joint ventures with Indian firms which can handle recruitment issues more efficiently. These local partners often have existing human capital with a known productivity level which can fulfill the needs of their Western partners. In addition to a highly skilled and motivated workforce, joint ventures offer other benefits such as the enhanced ability to handle the government bureaucracy and system of favors (As-Saber et al, 1998; Javalgi & Tallui, 1996; Kumar & Thacker-Kumar, 1996).

Besides entering into joint ventures, what else can Western companies do to attract and retain talented workers? One company, Prudential Process Management Services, focuses on retention via fast screening and hiring as well as offering immediate and extensive training. They also work with employees to point out career opportunities, offer partial tuition reimbursement, and support a family-oriented and balanced lifestyle (Grossman, 2006). Scholars A.K Paul and R. N. Anantharaman (2004) studied the relationship between Indian software engineers' perceptions of the work environment and organizational commitment. They

found that these engineers preferred four factors: (1) family-like work environments, (2) developmental performance reviews, (3) career development programs, and (4) extensive, customized training. Western managers may be surprised that other factors, such as salary, incentives, and popular team-based job designs, had little impact on increasing the organizational commitment of these Indian knowledge workers. For this reason, although increased money and empowered teams are successful motivators in the West, a company in India may be better able to differentiate itself and become the employer of choice by offering a work environment that focuses more on the intrinsic and self-development motivators which Indian workers may prefer. In addition, Western firms should focus on creating an enjoyable, friendly work culture, as well as fashioning integrated performance appraisal, training, and career development programs that will meet the needs of Indian knowledge workers. Among these needs are for job security and to quell fears of losing authority and power. Although Indian managers agree with the concept of participative management, they are accustomed to centralized authority, so managerial cultural change should be implemented slowly (Budhwar & Sparrow, 2002). A recent study of managers from high and low performing private and national banks found that the top performing private banks reduced role ambiguity, clearly defined tasks and goals, and supported this with training and employee performance appraisal (Priyadarshni & Venkatapathy, 2005).

PERFORMANCE APPRAISAL AND REWARDS

Traditionally, performance appraisal and rewards systems were consistent with India's isolationism and closed economy. Selection, promotions, and rewards were based more upon "who you know," i.e. political and social connections, and traditions rather than performance. Indian organizations were paternalistic, with decision making centralized at the top. Age, seniority and leadership were respected. Obedience, conformity, and organizational stability were valued. In turn, workers had life-long jobs and gained rewards based on firm tenure (Hofstede, 1980 & 1993; Limaye, 1998; Javalgi & Tallui, 1996). Because Indians have strong family ties and extended family relations, they tend to value family and group attainments over work outcomes (Hofstede, 1980 & 1993).

As the Indian economy opened and Indian firms faced competition from the global market, organizations changed. Inefficiencies were reduced so that prices could be lowered in order to better compete against foreign imports. Workers, some who may have become complacent, had to increase performance as life-long job security declined. Younger workers faced a different type of job environment than their parents. There were fewer manufacturing jobs available as firms moved operations to countries like China in order to save costs. Indian firms have increased their use of temporary workers. Unlike previous generations of workers, younger workers have become accustomed to short-term work arrangements and changing jobs more frequently. Research has found differences in the values of older and younger Indian workers, with younger workers becoming more individualistic (Mellahi & Guermat, 2004).

In general, performance appraisal systems have been underused in the India. Performance appraisal systems (PAS) have tended to be biased, with managers rewarding personal favorites or political allies. As the number of younger and women workers grows and competitive pressures increase, however, the use of objective performance-based PAS should become more acceptable. These PAS should complement the changing workplace culture and values and be integrated into other HRM and career systems (Amba-Rao, et al, 2000).

It is important that Western companies use their performance evaluation systems as a means of assessing employees and developing plans for continuous employee training and

development. As noted previously, Indian knowledge workers tend to value learning opportunities over pay and incentives (Paul & Anantharaman, 2004). Investing time and money into a strong performance evaluation system is worthwhile and can form the foundation for an integrated HRM system that ties appraisals and rewards with training and career development plans.

Western companies which provide continuous learning opportunities, including training via horizontal transfers, should continue to retain local employees long after the potential glamour of working for a multinational firm has faded. Young Indian managers are motivated by the chance for advanced education and international experiences. A learning environment in a well-respected company may be more appealing to these young Indians than money (Merchant, 2006). Employers should be cognizant of the value of their "branding" as an employer. Indian managers respond well to an employer with a reputation for fairness, respect, learning, (Merchant, 2006), with a reputation for advancement and having strong values (Grossman, 2006). This will also help to attract and retain employees. Perks and incentives should be culturally appropriate. Luxury items and vacation travel may be almost shocking to some employees in newly-developing countries. One solution is to adopt a system used by Hewlett-Packard in which employees have a number of options to choose from. HP offers a range of rewards based on feedback from their employees (Speizer, 2005).

One major mistake some Western companies make is simply transplanting reward programs that have been successful in their home countries to India. For instance, most Western workers experience increased job satisfaction from being empowered, with many viewing increased group participation as a reward. Empowered work teams are a trend among U.S. firms, with the benefits of such teams being heralded by best-selling books including William Byham and Jeff Cox's (1994) *HeroZ: Empower Yourself, Your Co-Workers, Your Company,* Jon Katzenbach and Douglas Smith's (1993) *The Wisdom of Teams*, and John Case's (1998) *The Open-Book Experience*. However, researchers have found that Indian workers become dissatisfied when empowerment is used (Probst, Martocchio, Drasgow, & Lawler, 2000). Western companies must take care to use reward systems which correspond to the culture and changing vlues of their Indian workers. Nonetheless, despite India's collectivist culture, the impact of Western culture and the lure of material goods are influencing what Indian workers desire. For example, wages for IT workers, bankers, pilots and engineers increased by up to 30% in one year alone (Larkin, 2006) and bonuses of 100% in the financial services field are not unusual (Adhikari, Bajaj, Sheth, 2006).

Another PAS and reward issue in India is the role of women in the work environment. The Indian government has taken important steps to increase the number of women in the labor force as well as promote the advancement of women. For example, India's Factories Act of 1948 requires firms with thirty or more women workers to have an on-site childcare center for children under the age of six. The Contract Labor Act of 1970 requires any labor site with more than twenty women workers to have a day care center. The Maternity Benefits Act of 1929 and 1961 permits women to take paid leave for six weeks before and six weeks after the birth of a child. However, the law only applies to the women's first three births.

Although legislation has been enacted to encourage the advancement of women in the workplace (e.g., The Equal Remuneration Act of 1976 which guarantees equal pay for the same work regardless of gender), arranged marriages are still common and changes in gender-roles are only slowly being integrated into day-to-day work life (Komarraju, 1997). Times have changed in that more women are expected to seek education and contribute to the family's income, but Indian culture places greater emphasis on women's social duties, with marriage and

motherhood still being the foundation of a woman's self-identity. Despite the fact that women in India usually have more assistance from relatives in helping care for children than do women in Western countries, employed women in India still have difficulty managing work/family balance. While the majority of husbands report being supportive of their wives working, Indian husbands still lament the lack of time their wives have for caring for the needs of their husbands and children. Indian women often accept reduced career options and advancement opportunities as a means of maintaining peace in the home and to better managing the conflict between work identity and the traditional role as the "good, dutiful wife and mother" (Komarraju, 1997).

Despite government efforts, gender based discrimination still occurs. Predominantly male, Indian managers may avoid hiring women (Budhwar & Sparrow, 2002). Women comprise just 20% of the workforce in cities with half of them exiting the workforce by the time they reach age 30 (Grossman, 2006). To effectively recruit and retain talented women employees, organizations may wish to expand their definition of "family friendly" by creating an organization climate that supports working mothers. In addition to childcare centers and parental leave, other programs, such as flextime, alternative work arrangements, and telecommuting, could be considered. Likewise, organizational initiatives to encourage the promotion of women should be put in place and could include: monitoring both number of women in upper levels as well as the number of women in the leadership pipeline; developing mentoring programs; and forming networks of working mothers who share not only support but strategies for coping with work and family conflict. More direct involvement by upper management may be necessary. Companies such as General Electric, Coca-Cola, and Motorola have developed structured means to communicate with women and leverage their talent. They support women's career progress by recruiting more women, having specific goals regarding the advancement of women, and including more women in strategic planning. However, diversity initiatives are still more prevalent in U.S. based rather than Indian corporations (Agrawal, 2006).

TRAINING AND CAREER DEVELOPMENT

In light of increased global competition, many Indian organizations have become aware of the need to upgrade employees' skills and have established senior-level positions for the training and development function. Past research on training in India has reported little return on investment. Training was often treated as a fringe benefit with little transfer of training occurring (Yadapadithaya, 2000). Recently, more Indian firms have begun to consider the value of training. For instance, Yadapadithaya (1999 reported in Yadapadithaya, 2002), in a study of 252 Indian organizations, found that firms had greatly increased the amount of money, staff, and hours devoted to the training and development function. Yadapadithaya found a change in managerial attitudes toward the training function, with training now being viewed as an investment rather than simply a cost. Approximately 70% of the firms studied used techniques including job rotation and executive development as well as created programs on interpersonal communication, innovation, leadership, and teams. It was also suggested that Indian firms take note of and improve in five areas of training and development, including: (1) the lack of extensive training needs assessment, (2) the lack of transfer of training to the work environment, (3) the lack of clear, written training and development policies, (4) the lack of systematic evaluation of training effectiveness, and (5) the lack of communication between companies and institutions providing training.

Western firms can gain a competitive advantage by addressing these weaknesses in training and development and fulfilling Indian knowledge workers' needs for continuous learning and improvement. Younger workers may especially feel rewarded and satisfied with training opportunities that include expatriate experiences, on-the job learning, and working on high-tech,

challenging projects which permit maximum growth. Training programs can be especially effective when linked with career development and succession planning systems. Communication about the success of training programs, the support of senior management and rewards for training are options that should be considered by Western firms operating in India (Kodwani & Singh, 2004).

Unfortunately, there has been a lack of research on careers in India, and on non-western countries in general (Sullivan, 1999). Because of increased global competition and the related rise in demands for productivity and flexibility, job security in India has declined. Individuals' beliefs about the employee-employer psychological job contract (e.g., job security in exchange for organizational commitment) have changed and continue to evolve as younger employees with different values move into the labor force (Mellahi & Guermat, 2004).

In one of the few studies of Indian HRM systems, Badhwar and Baruch (2003) surveyed 108 Indian human resource mangers about their career management systems. The five most frequently used career development techniques were: (1) performance evaluation as the foundation for career planning, (2) succession planning, (3) formal education as part of career development, (4) career counseling provided by the direct supervisor, and (5) career counseling provided by the human resource department. These findings illustrate the importance of an integrated HRM system, including such links as those between performance appraisal and career planning. Moreover, retirement planning was the least frequently used technique, reinforcing the erosion of the life-long employment psychological contract between Indian workers and organizations.

Training is a critical component in developing and maintaining talent in our global knowledge economy. Training and other efforts at securing and maintaining necessary skills must take place in a supportive learning environment. A positive workplace culture will foster knowledge sharing and creation and provide a strategic advantage. This may be accomplished when human resource and organizational interventionist collaborate to create such an environment. Forming such a system may be more of a challenge in India, where HR is still not solidly in place as an essential functional area (Budhwar & Sparrow, 2002). Organizations operating in India, however, should be encouraged by some recent Indian success stories. Some Indian firms have developed an organizational culture and used a balance performance scorecard approach, as well as changed the managerial hierarchy and role behaviors to result in better performing, more adaptable organizations (Bhatnagar, Puri, & Jha, 2004).

CONCLUSION

Western companies often don't realize that many Indians view Western investors with suspicion and distrust. Many Indians fear that Westerns will "buy up" their country and erode India's culture and values. Others worry about Westerns bringing in consumer products that add little value to the country as demonstrated by the popular phrase "computer chips not potato chips" (Limaye, 1998; Ramachandran, 2000). It is helpful for Western companies to show their interest in India and her people by supporting the local community (e.g., contributing to local charities, sponsoring local sports teams) and avoiding becoming involved in India's internal politics (Ramachandran, 2000).

It is especially important for U.S. companies to build greater trust with the Indian people. The political relationship between India and the US governments has not always been warm. Unlike many European countries who were U.S. war-time allies and received U.S. assistance, the U.S. and India lack such shared experiences. Further, many Indians believe that the U.S.

could have provided more support in its struggle for independence from the British. A chilly climate existed between the two countries during the cold war. Many Indians believe that the U.S. favors the People's Republic of China and Pakistan over India and were dismayed by the U.S.'s use of pressure to obtain India's agreement to the recent Nuclear Nonproliferation Treaty (Limaye, 1998). Nonpolitical events such as the Union Carbide Bhopal disaster are still memorialized to remind Indian citizens of the danger of Western investment and how Westerns may show a lack of regard for the local population.

In addition to issues of trust between India workers and US companies, there is growing U.S. domestic concern about the outsourcing of jobs to India, causing increased tension between the two countries. For instance, *Fast Company Magazine* (April 2004) had a special article called "Look Into Their Eyes" which featured the photos and often heartbreaking stories of individuals who had lost their jobs to outsourcing. Consider the story of Joan Pounds, a former IT representative at Agilent. Joan was so committed to the firm, that when she was seven months pregnant, she walked though a blizzard to get to work--- and then stayed for three extra shifts in order to keep things functioning. She was stunned when she was laid off in July 2003 and was even more surprised when she was asked to train her replacements via videoconference, because they all lived in India. Similarly, CNN's Lou Dobbs has a "Shame On You" list of U.S. companies exporting jobs overseas and websites such as "yourjobisgoingtoIndia.com" are rising in response to U.S. workers' anger about the export of jobs to countries including India and China (Reingold, 2004).

Organizational leaders need to be especially aware of growing political and economic tensions among countries, because such tensions are likely to spill over into the workplace. Such tensions may cause diversity problems within work teams, especially teams composed of members from many different countries. Likewise, increased political problems between countries may increase the problems encountered by expatriate managers. Virtual work teams composed of members around the globe also may need assistance in overcoming negative attitudes and stereotypes.

Given the potential for tension between Indian and Western workers, it is important that Western managers be very sensitive about how they discuss and handle these differences (Dalton, 2005). For example, while many Westerners are accustomed to openly criticizing their own governments, with politics being the subject of many comedians' jokes, the Indian people tend to be very sensitive to criticism, especially from outsiders. During the recent tsunami crisis, the Indian government released little information about the devastation, asked for little assistance from other countries, and symbolically offered monetary aid to other countries to downplay the extent of the destruction and illustrate their ability to take care of themselves. Those in the country during the crisis gained most of their information about the event from non-Indian news agencies and word of mouth (author, personal observation, January, 2005). In order to avoid such misunderstandings, firms would be wise to provide cultural sensitivity and other training to Western managers who are collaborating with Indian colleagues, whether through expatriate assignments, virtual teams, e-mail or pairing with a bi-cultural Indian mentor.

By and large, because of increased urbanization, government affirmative action programs, the rising number of younger workers and women in the workforce, and escalating competitive pressures (Amb-Rao et al 2000), management in Western firms must change to capture the current needs and values of Indian workers in order to develop their human capital. In general, Indian workers accept Western management theories which mesh with their culture, whereas ideas or programs that don't mesh with cultural traditions are often rejected, usually in covert ways. Western managers must be observant and monitor which programs are effective

and which are being underutilized because of lack of cultural fit. In developing human resource strategies, one of the challenges Western companies face is recognizing and respecting the complexities of the Indian people. Western companies operating in India should focus on efforts that encourage the continued employment of qualified workers through an admired corporate culture which includes providing such experiences as expatriate travel, challenging on-the-job learning opportunities, and integrated performance evaluation systems that provide the necessary information to advance individual workers' developmental needs.

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IDENTITY THEFT PREVENTION: THE IMPORTANCE OF EDUCATION ON BEHAVIORS AND INTENTIONS

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Absbract: Identity theft has become one of the most widespread and terrifying problems as the internet continues to provide vast amounts of information and opportunities for fraudsters. Credit card companies, governmental agencies, and financial institutions encourage consumers to be aware of the dangers of identity theft and to protect their identity. Intervention in the form of education about protection against identity theft may encourage consumers to alter their behavior in guarding their personal data from misuse. This study explores the effects of identity theft education on behavioral intentions. Our research points to the importance of, and need for, direct, focused education in the efforts to combat continued identity theft.

INTRODUCTION

Thieves and impostors have stolen from and defrauded those in society for all of recorded history; over the past decade, however, the growing number of identity theft cases has caused many to become justly concerned. Identity theft is the use of personal information such as someone's name, social security number, credit card number, or other identifying information, without their permission, to commit fraud or other crimes (Federal Trade Commission or FTC, 2003). Identity theft has been the leading consumer-fraud complaint for the last five years and represents a $55 billion combined cost to both businesses and consumers (The Economist, 2005). Nonetheless, this issue goes beyond personal security and financial loss; higher prices and loss of service occurs as businesses absorb losses and spend significant amounts of time dealing with security breaches that result in a burden on consumers and society at large. Considered by many to be the fastest growing crime in the United States, identity theft has jumped to the forefront of almost all consumer fraud discussion.

REVIEW OF LITERATURE

Identity thieves obtain a victim's information through several means including the stealing of personal documents from a victim's home, business, or person directly (e.g., wallets, purses); stealing of bank and credit card statements as well as pre-approved credit offers from a victim's mailbox, sometimes right in front of their house; and rummaging through the trash of a business or personal residence seeking documents with personal details (FTC, 2003). However, in the last decade and a half thieves have acquired new methods that can be utilized in obtaining victims' personal information.

The Internet has played a key role in the growth of identity theft activity and in the way identity thieves obtain personal information. Companies now maintain massive online databases of consumer information. Many of these companies are involved in selling this information to legitimate parties, such as employers performing background checks and lawyers preparing for litigation. However, those who would use the information fraudulently can also make purchases from these information-storing companies. Add to this the recent reports of security breaches at several of these companies where information from tens of thousands of consumers was fraudulently accessed, and there is clearly cause for concern (Kuehner-Hebert,

2005).

Phishing is another of the internet scams that has recently grown to be commonly used to obtain personal information. Identity thieves send out phony emails appearing to be from legitimate organizations, such as a bank or internet service provider, asking the individual to update or confirm their personal information. The e-mails usually threaten some action if the personal details are not entered. A link is provided to a site that looks like the organization's website; the phisher, however, has set up the web page to collect the user's information (FTC, 2003). It would seem that identity thieves no longer have to hack into computers; they simply set their traps and wait for unsuspecting consumers to give up their personal information voluntarily and unknowingly.

Once the personal information has been gathered by the identity thieves serious damage can result. Bank, credit card, cell phone, and auto loan accounts can be opened and obtained by the thieves. The thieves can also declare bankruptcy or give false information to police during an arrest, all with the name and information of the victim. Unfortunately, criminals often complete change of address forms, causing appropriate notices not to reach the victim; therefore, it is usually months, if not years, before the victim realizes what has happened (FTC, 2003).

Although there are more and more articles being published in magazines and newspapers on the subject of identity theft, the body of academic research on the topic is only beginning to grow. Previous research has found that consumers have not taken adequate actions to protect themselves from identity theft and that current education, although sufficient for several preventative behaviors, is still in need of improvement. Milne (2004) examined the online behaviors that affect online identity theft, and found that attitudinal, behavioral, and demographic factors predicted the propensity of the survey respondents to protect themselves from online identity theft. O'Neill (2005) also found that most of those surveyed did not obtain an annual credit report even when it was available free of charge. Both Milne (2003) and O'Neill (2005) reiterated the need for increased education. The purpose of this article, therefore, is to study the effectiveness of basic education to affect the identity theft prevention behaviors and intentions.

RESEARCH QUESTIONS

One main hypothesis was developed based on the study's main thesis: Education is important in combating the threat of identity theft. Therefore, we propose our first hypothesis:

H1: Identity theft prevention intentions will change when individuals are presented with basic identity theft information.

With the growth of identity theft in the last decade, a corollary research question was deemed appropriate. That is, does prior exposure to identity theft (i.e., oneself, others, or through the media) cause one to safeguard one's identity more? We might expect individuals with greater prior exposure to identity theft to be more careful and cautious. Thus, we propose a second hypothesis:

H2: Prior identity theft exposure will be associated with greater identity theft protection behaviors.

METHODOLOGY

A four-section survey was developed. Seven demographic questions made up the first section, including questions on gender, income, personal experience of identity theft, and student-faculty status. The next section focused on the current identity theft prevention behavior of the respondents. Concern for identity theft, treatment of personal documents and passwords, and computer behavior was the focus of this second survey section. The third section presented the behavioral changing catalyst to the respondents; it consisted of an excerpt from the Federal Trade Commission publication, "ID Theft: When Bad Things Happen to Your Good Name" (FTC, 2003). The excerpt, taken from the initial pages of the booklet, presented the respondents with basic information on how identity thieves both get and use their personal information. The fourth and critical section dealt with the future behavioral intentions of the respondents; the questions are almost identical to those in the second section with only the tenses being changed from present to future in most of the questions. Answers to the survey questions were either "Yes" or "No" unless the question involved a specific action or attitude.

The survey was conducted using the online tool www.surveymonkey.com from Feb. 16, 2005 to March 12, 2005. Students and faculty of a southern, liberal arts-based private college were surveyed. Campus-wide e-mails requesting participation in the survey were sent to the two groups using the College e-mail system; at the time the e-mails were sent, 1921 student and 115 faculty entries were included in the college e-mail distribution lists. One hundred sixty-seven students and 44 faculty completed the online survey, 8.7 percent and 38.3 percent of the populations, respectively. Since a sizable proportion of students do not use their college accounts, favoring non-college e-mail accounts (e.g., Hotmail or Yahoo) over their college accounts, the actual response rate is probably higher for the students who received the e-mail.

RESULTS

Demographics for the two samples are presented in Table 1. Over 97 percent of the participants have seen some form of media advertising concerning identity theft and approximately 40 percent of both groups personally know someone who has experienced identity theft. The percentage of faculty who had personally experienced identity theft was almost three times higher than that of students.

Another dramatic difference in the demographic information of respondents was in income levels; as would be expected, 95.5 percent of faculty reported income levels over $25,000 compared with only 1.2 percent of students. This may explain why the percentage of individuals "very concerned about identity theft" among faculty was more than twice that of students. In fact, 7.2 percent of student respondents indicated that their lack of concern is a direct result of their limited resources.

H1 was tested first. Many of the survey items were categorical (e.g., yes, maybe, no). In order to create continuous variables, two global variables were created: one encompassing pre-test identity theft prevention *behaviors* and the other encompassing post-test identity theft prevention *intentions*. These were created by adding together 10 of the appropriate pre-test and post-test questions. This action converted several dichotomous and/or categorical variables into a continuous variable—allowing for parametric statistical analysis. Parametric statistical analysis also requires variables without undue skewness or kurtosis (Brown, 1996). Thus the variables were tested and did pass tests for skewness and kurtosis per Brown (1996): i.e., the test statistics were less than two times the standard error.

Table 1

Demographics	Students	Faculty
Gender		
Male	17.40%	47.70%
Female	82.60%	52.30%
Campus Status		
Student, Boarding	74.30%	N/A
Student, Commuting	25.70%	N/A
Personal Annual Income		
Under 10k	85.60%	2.30%
10k-25k	13.20%	2.30%
Over 25k	1.20%	95.50%
Have you ever personally experienced identity theft?		
Yes	4.80%	13.60%
No	95.20%	86.40%
Do you personally know someone who has experienced identity theft?		
Yes	37.70%	40.90%
No	62.30%	59.10%
Have you seen television or other media advertising concerning identity theft?		
Yes	97.60%	97.70%
No	2.40%	2.30%
How concerned are you about identity theft?		
Slightly concerned	32.30%	15.90%
Somewhat concerned	46.70%	54.50%
Very concerned	13.80%	29.50%
I have limited resource at risk and therefore do not have to be concerned	7.20%	0.00%

The 10 questions for each global variable were also combined to reduce the possibility of Type 1 error (i.e., falsely rejecting the null hypothesis due to several tests at .05 level of significance), and to get an idea of global change pre- and post-test for the study's respondents. The 10 combined items related to changing PIN numbers regularly, sharing PIN numbers (reverse scored), writing down PIN numbers (reverse scored), changing passwords regularly, sharing passwords with others (reverse scored), writing down passwords (reverse scored), reconciling bank statements, purchasing a credit report, caring for purse/wallet, and giving personal information over the phone (reverse scored).

A paired samples t-test was then run to determine if there was a significant global difference between reported identity theft prevention *behaviors* pre-test and identity theft prevention *intentions* post-test, with a greater difference indicating greater identity theft

prevention (when the post-test score was lower than the pre-test score). As Table 2 shows, the global difference was significant in the direction of greater identity theft prevention intentions post-test. The pre-test average score of 14.03 (S.D. 1.56) minus the post-test average score of 12.96 (S.D. 1.84) equals a mean difference of 1.076. The t-value was 10.29 with a p-value <.001. This result lends strong support to H1: Identity theft prevention behavioral intentions will change when individuals are presented with basic identity theft information. (Given this significant global difference, it was then deemed appropriate to make individual pre- and post-test comparisons. Those are noted in Table 2.)

Table 2

Paired Samples T-Test: Pre- and Post-Test for Global Variable Difference

Source	N	Mean Difference	SE of Mean	t-value	Sig.
Pre- Minus Post-Test	210	1.076	.105	10.288	<.001

As noted, a large number of the variables were dichotomous (i.e., yes or no responses), therefore traditional parametric tests were not appropriate. The McNemar chi-square test is appropriate when two sets of dichotomous data coming from a single group are being compared (Huck, 2000). The McNemar's test statistic is calculated through creating a 2 x 2 table (see Table 3) indicating the number of subjects who responded no at time 1 and then no (a) or yes (b) at time 2, and those who responded yes at time 1 and then no (c) or yes (d) at time 2. The test statistic is calculated as follows: $(c\text{-}b)^2/c+b$.

Table 3

McNemar's Chi-Square Table

		Time 2	
		No	Yes
Time 1	No	a	b
	yes	c	d

Seven of the questionnaire items had yes/no responses and were appropriate for comparison and testing via the McNemar method. Thus, McNemar chi-square tests were computed for these seven pre- and post-test variables as shown in Table 4. With one degree of freedom and a .05 significance level the chi-square critical value is 3.84. As shown, all but one of the pre- and post-test measures were significantly different at the .004 level or less, with chi-square values of 9 or higher. With the exception of the question regarding purse/wallet carefulness, respondents reported significantly increased identity theft prevention intentions over their current identity theft prevention behaviors in the six areas** shown in Table 4. Again, this is strong support for H1: Identity theft prevention behavioral intentions will change when individuals are presented with basic identity theft information.

H2 addressed the effects of prior identity theft exposure (IDTE) on prevention behaviors. Three survey questions dealt with prior exposure to and experience with identity theft: 1) Have you ever personally experienced identity theft?; 2) Do you personally know someone who has experienced identity theft?; and 3) Have you seen television or other media advertising concerning identity theft? To assess their overall effects, the responses to these questions were combined into one global IDTE variable. A regression was then run to determine if IDTE

might predict pre-test identity prevention *behaviors* as measured by the 10-item global pre-test variable of identity theft prevention behaviors (described previously).

Table 4

Summary of McNemar's Chi-Square Tests for Pre- and Post-Test Differences

Survey Question: Do you (Time 1)…Will you (Time 2)…	McNemar's Chi-Square Value	Significance (2-sided)
Share your PIN numbers with others?	11**	.001
Write down your pin numbers?	9**	.004
Change personal passwords regularly?	28.17**	<.001
Share your personal passwords with others?	16**	<.001
Write down your personal passwords?	14.22**	<.001
Regularly reconcile your monthly bank statements?	16.9**	<.001
be more careful about keeping your purse/wallet than 2 yrs. ago?	.19	.771
Ever give your personal information (SS#, etc.) over the phone?	40**	<.001

**p <.01.

Surprisingly, IDTE did **not** predict reported pre-test identity theft prevention behaviors, as shown in Table 5. The regression coefficient (B) was .098 with standard error of .178, t-value was .561 with a significance level of .576.

Table 5

Summary of Regression for IDTE* Predicting Pre-Test Global ID Theft Prevention

Predictors	B	SE	T	Sig.
Constant	13.59	.804	16.90	<.0001
IDTE	.098	.174	.561	.576

*Identity Theft Experience (IDTE)

A regression was then run to see if the change between the pre-test identity theft prevention *behaviors* and the post-test identity theft prevention *intentions* might have been affected by IDTE. In effect, we might predict that those with less IDTE might be influenced more by this study's behavioral catalyst. Thus, a difference variable was created by subtracting the 10-item global post-test prevention *intentions* variable from the 10-item global variable pre-test prevention *behaviors* variable. A regression was then run to ascertain if IDTE predicted this difference (or change) between pre- and post-test scores.

We might expect those with lower IDTE to have a greater change between pre- and post-tests—as they have previously had less exposure to identity theft. The regression, however, was **not** statistically significant. As shown in Table 6, the regression coefficient (B) was .181 with a standard error of .177, t-value was 1.024 and the significance level was .307. Thus, no support was found for H2: previous identity theft experience (IDTE) was not associated with current identity theft prevention behaviors; in addition, IDTE did not affect the change between pre-test prevention behaviors and post-test prevention intentions.

Table 6

Summary of Regression for IDTE Predicting Pre- to Post-Test Change in ID Prevention

Predictors	B	SE		T	Sig.
Constant	.247	.817		.302	.763
IDTE	.181	.177		1.024	.307

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Strong support was found for H1. The study's behavioral catalyst did lead to a significant change from pre-test identity theft prevention behaviors to post-test identity theft prevention intentions. Education, therefore, seems to be an important element in addressing the threat of identity theft.

Support was not found for H2. Self-reported identity theft exposure (IDTE) did not seem to be associated with identity theft prevention behaviors. In addition, IDTE did not seem to affect the changes that occurred between respondents' pre-test prevention behaviors and post-test prevention intentions.

The most obvious limitation of this study is that behavioral changes were indicated by stated intentions for future behavior—not actual behavioral changes. In the future, this study could be repeated by surveying twice, initially where the identity theft information would be presented and again after an appropriate time period to measure actual behavior changes.

It would also be beneficial to determine what method of education or experience is most effective in terms of stimulating behavior change—respondents were affected by this study's behavioral catalyst, an FTC (2003) guide to identity theft, but they did not seem to be affected by self-reported exposure to identity theft. Future research could disentangle these effects of education and experience on identity theft prevention behaviors.

These findings support the premise of Milne (2003) and O'Neill (2005), who have found that education is the most effective preventative measure for those who might become victims of identity theft. As the internet continues to grow and information flows become even more ubiquitous, a population well educated on identity theft prevention will safeguard itself more and reduce this ever growing crime, while saving time and money for society at large.

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Appendix 1 - Survey Questions

A. Gender
   1. Male
   2. Female
B. Campus Status
   1. Student, Boarding
   2. Student, Commuting
   3. Faculty
C. Personal Annual Income
   1. Under 10k
   2. 10k-25k
   3. Over 25k
D. Have you ever personally experienced identity theft?
   1. Yes
   2. No
E. Do you personally know someone who has experienced identity theft?
   1. Yes
   2. No
F. Have you seen television or other media advertising concerning identity theft?
   1. Yes
   2. No
G. How concerned are you about identity theft?
   1. Slightly concerned
   2. Somewhat concerned
   3. Very concerned
   4. I have limited resource at risk and therefore do not have to be concerned
H. Do you change PIN numbers regularly?
   1. Yes
   2. No
I. Do you share your PIN numbers with others?
   1. Yes
   2. No
J. Do you write down your PIN numbers?
   1. Yes
   2. No
K. Do you change personal passwords regularly?
   1. Yes
   2. No
L. Do you share your personal passwords with others?
   1. Yes
   2. No
M. Do you write down your personal passwords?
   1. Yes
   2. No
N. Do you regularly reconcile your monthly bank statement(s)?
   1. Yes
   2. No
O. Have you purchased a personal credit report within the last 2 years?
   1. Yes
   2. No

P. How do you treat unused Pre-approved credit card applications?
   1. Throw away
   2. Shred
   3. Other (please specify)

Q. How do you secure personal documents?
   1. Safe deposit box
   2. Locked safe at home
   3. File cabinet at home
   4. Other (please specify)

R. Are you more careful about keeping your purse or wallet with you than you were two years ago?
   1. Yes
   2. No

S. Would you ever give your personal information (Social Security Number, Driver's License Number, Mother's Maiden Name) over the phone?
   1. Yes
   2. No

T. Do you have an active antivirus program on your Personal Computer?
   1. Yes
   2. No

U. Do you shop and buy online?
   1. Yes
   2. No
   3. Yes, but only at secured websites

V. Do you respond to unsolicited email (SPAM)?
   1. Yes
   2. No

W. How concerned are you about identity theft compared to before you read the previous pages?
   1. Less concerned
   2. No change
   3. More concerned

X. Will your behavior involving the protection of your identity change?
   1. Yes
   2. No

Y. Will you change PIN numbers regularly?
   1. Yes
   2. No

Z. Will you share your PIN numbers with others?
   1. Yes
   2. No

AA. Will you write down your PIN numbers?
   1. Yes
   2. No

AB. Will you change personal passwords regularly?
   1. Yes
   2. No

AC. Will you share your personal passwords with others?
   1. Yes
   2. No

AD. Will you write down your personal passwords?
1. Yes
2. No

AE. Will you regularly reconcile your monthly bank statement(s)?
1. Yes
2. No

AF. Will you purchase a personal credit report in the next 6 months?
1. Yes
2. No
3. Maybe

AG. Will you change the way you treat unused Pre-approved credit card applications?
1. Yes, Throw away
2. Yes, Shred
3. No Change
4. Yes, Other (please specify)

AH. Will you change the way you secure personal documents?
1. Yes, Safe deposit box
2. Yes, Locked safe at home
3. Yes, File cabinet at home
4. No Change
5. Yes, Other (please specify)

AI. Will you be more careful about keeping your purse or wallet with you than you were a two years ago?
1. Yes
2. No

AJ. Will you ever give your personal information (Social Security Number, Driver's License Number, mother's maiden name) over the phone?
1. Yes
2. No

AK. Will you install an active antivirus program on your Personal Computer?
1. Yes
2. No
3. Maybe
4. I have already done so

AL. Will you shop and buy online using unsecured websites?
1. Yes
2. No

AM. Will you respond to unsolicited email (SPAM)?
1. Yes
2. No

Appendix 2 - ID Theft Information

How identity thieves get your personal information:

- They steal wallets and purses containing your identification and credit and bank cards.
- They steal your mail, including your bank and credit card statements, pre-approved credit offers, new checks, and tax information.
- They complete a "change of address form" to divert your mail to another location.
- They rummage through your trash, or the trash of businesses, for personal data in a practice known as "dumpster diving."
- They fraudulently obtain your credit report by posing as a landlord, employer or someone else who may have a legitimate need for, and legal right to, the information.
- They find personal information in your home.
- They use personal information you share on the Internet.
- They scam you, often through email, by posing as legitimate companies or government agencies you do business with.
- They get your information from the workplace in a practice known as "business record theft" by: stealing files out of offices where you're a customer, employee, patient or student; bribing an employee who has access to your files; or "hacking" into electronic files.

How identity thieves use your personal information:

- They call your credit card issuer and, pretending to be you, ask to change the mailing address on your credit card account. The imposter then runs up charges on your account. Because your bills are being sent to the new address, it may take some time before you realize there's a problem.
- They open a new credit card account, using your name, date of birth and SSN. When they use the credit card and don't pay the bills, the delinquent account is reported on your credit report.
- They establish phone or wireless service in your name.
- They open a bank account in your name and write bad checks on that account.
- They file for bankruptcy under your name to avoid paying debts they've incurred under your name, or to avoid eviction.
- They counterfeit checks or debit cards, and drain your bank account.
- They buy cars by taking out auto loans in your name.
- They give your name to the police during an arrest. If they're released from police custody, but don't show up for their court date, an arrest warrant is issued in your name.

Source: FTC; "ID Theft: When Bad Things Happen To Your Good Name"
http://www.ftc.gov/bcp/conline/pubs/credit/idtheft.htm

RECRUITING ONLINE: A PASSING FAD OR AN EFFECTIVE WAY OF MEETING RECRUITMENT GOALS?

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Abstract: One recruitment source that has been become increasingly popular in recent years is online recruiting (Braddy, Thompson, Wuensch, & Grossnickle, 2003). Some estimates indicate that 90 percent of large US companies recruit online (Cappelli, 2001). Furthermore, other reports indicate that approximately 96% of the Fortune 500 organizations currently have an online job page or career section on their corporate website (Taleo, 2006). In addition, surveys show that over 46 million people look for information about jobs online (PewInternet, 2006). Despite these trends, there is a need to examine the degree to which e-recruiting is effective. Thus, the present paper considers the advantages and disadvantages of different forms of online recruiting. In addition, it examines the extent to which online recruitment helps organizations meet its recruitment objectives. It merits noting that the objectives assessed in this paper were those discussed in the Breaugh and Starke (2000) model of the recruitment process and includes: cost, speed, employee satisfaction and retention rates, quantity and quality of applicants, and diversity of applicants.

One recruitment source that has been become increasingly popular in recent years is online recruiting (Braddy, Thompson, Wuensch, & Grossnickle, 2003). Some estimates indicate that 90 percent of large US companies recruit online (Cappelli, 2001). Furthermore, other reports indicate that approximately 96 percent of the Fortune 500 organizations currently have an online job page or career section on their corporate website (Taleo, 2006). In addition, surveys show that over 46 million people look for information about jobs online (PewInternet, 2006).

It is apparent from the research noted above that online recruitment has become a very important source of talent, and offers a host of advantages for organizations. For example, research shows that e-recruiting may reach a wider array of job applicants than traditional recruitment sources (Chapman & Webster, 2003; Galanaki, 2002; Stone, Lukaszewski, & Isenhour, 2005). In addition, studies have indicated that e-recruiting may lower the overall cost and increase the efficiency of the recruiting process (Stone et al., 2005). Despite these advantages, researchers have argued that there are also some potential drawbacks of using e-recruiting (cf. Stone et al., 2005). For instance, some researchers contend that e-recruiting may pose threats to personal privacy, and inadvertently limit the diversity of new hires in organizations (Stone et al., 2005). Given the widespread use of e-recruiting and the potential benefits and challenges associated with its use, the primary purposes of this paper are to examine: a) the forms of e-recruiting, b) the advantages and disadvantages of using different forms of e-recruiting, and c) consider the extent to which e-recruiting enables organizations to meet their recruitment goals including reduction in costs and cycle times, increased number of qualified applicants, enhanced employee satisfaction and retention rates, and increased diversity of applicants. Thus, in the sections that follow each of these online recruitment issues is considered.

METHODS OF ONLINE RECRUITMANT

There are many different forms of online recruitment that a company may use to attract

applicants (Galanaki, 2002). For instance, online recruitment approaches include: a) adding a career section or job page to an existing organizational website, b) posting a job opening on an Internet job board, c) searching applicant databases, and d) mining databases (Heneman & Judge, 2006). Each method will be presented as well as the advantages and disadvantages associated with each.

Company Websites

Many organizations are taking advantage of their existing websites and adding a career section that include information on job openings. This method is very attractive to organizations because job postings can be made available to potential applicants outside the organization as well as their own current employees. The popularity of online recruitment has grown so that almost 100 percent of the Fortune 500 companies now use current websites and career sections to post job openings (Taleo, 2006). Note that about 38 percent of American companies used these systems in 1999 (Cober, Brown, Blumental, Doverspike, & Levy, 2000).

Advantages of company website. One advantage of using websites to post job openings is that the information is available to applicants 24 hours per day and 7 days a week. As a result, potential applicants can access job-related information at their convenience any time of the day or night (Buckley, Minette, Joy, & Michaels, 2004). These web-based recruiting systems may lower the opportunity costs and time associated with searching for jobs so thus the use of online recruitment has become very attractive to job seekers (Cober et al., 2000). A second advantage of adding a page to the organization's website is the fact that the website already exists and adding new links or sections costs little or nothing for organizations (Cober et al., 2000; Galanaki, 2002). Given that the website belongs to the company, the company can post a considerable amount of job and company information which should help them attract the highly skilled employees needed to fill job vacancies. In addition, the organization can post any new job openings without delay (Cober et al., 2000), and candidates may apply immediately online for job openings. By allowing applicants to apply for jobs online, an organization may reduce the administrative costs associated with processing job applications and should actually reduce the cycle time for new hires (Cappelli, 2001; Chapman & Webster, 2003). A third advantage of using a company website for recruiting is that companies can link their product information and advertising to their recruitment sections which can help build their human resource brand image (Cappelli, 2001). Thus, research shows that e-recruiting may be particularly effective when companies have a prominent reputation in the marketplace or are especially known for their information technology reputation (Galanaki, 2002). A final advantage of using company websites for recruiting is that companies can use websites to collect applicant data (i.e., resumes, application blanks, or both), and many use these systems to screen applicants for job-related skills and abilities (Stone et al., 2005).

Disadvantages of company websites. One major disadvantage of using the company's website to attract potential applicants is that individuals must go directly to the organization's website to find the job opening. Therefore, if a company is not well known job seekers may not search their websites for job openings (Cober et al., 2000). As a result, a substantial pool of applicants may not be generated through the use of the organization's website. Another disadvantage is a company may not always build a resume screening system on their recruitment website. As a result, they may not be able to handle the large influx of applicants generated by online systems. For example, in 1998 Deloitte Consulting LLC received 10,000 applications for fewer than 1,000 jobs (Cober et al., 2000). The company had not prepared for processing the volumes of applications received, and quickly had to reconfigure their website to include screening systems for determining who was qualified for the jobs (Cober et al, 2000). A

third disadvantage of using websites is that the attributes associated with the website (e.g., attractiveness, ease of use) may send inaccurate signals about the quality or efficiency of organizations to job applicants. As a result, the attributes of the website may affect the extent to which applicants apply for jobs (e.g., Cober, R.T. Brown, D.J., Levy, P.E., Keeping, L.M., & Cober, A.L., 2003; Scheu, Ryan, & Nona, 1999; Zusman & Landis, 2002).

Internet Job Boards

A second way for companies to recruit online is to post their job openings on Internet job boards (e.g., Monster.com and Careerbuilder.com). Currently, there are over 5,000 job boards on the Internet to choose from (Bernardin, 2003). The 2006 Recruiting Trends Survey, conducted by Booz Allen Hamilton, found that companies are allocating 27 percent of their recruitment advertising budget on Internet general job boards (IOMA, 2006). The same survey revealed that in 2005 about 21 percent of new hires came from Internet general job boards and 15 percent were from Internet specialized job boards.

Advantages of Internet job boards. The use of Internet job boards can be quite beneficial because they allow organizations to post their job openings and job seekers to post their resumes (Cappelli, 2001; Cober et al., 2000). As a result, organizations can search posted resumes to find applicants that match their position requirements. Many Internet job boards have made this easier by adding sections on their website that focus on specific topics. For instance, job boards may include sections that focus on industries (i.e., health care, engineering, accounting), applicant diversity (i.e. Asian applicants, Hispanic applicants), or geographical area (i.e., Northeast, Southwest) (Bernardin, 2003; Cappelli, 2001). These sections can be help organizations to focus their recruitment efforts and should decrease the cost and time needed to fill positions.

Another advantage of using Internet job boards is they generate a large number of job applicants. For example, some estimates indicate that close to 50 million people look for jobs online (PewInternet, 2006). The large applicant pools associated with Internet job boards make these systems very attractive to employers. Furthermore, these systems expose job seekers to all types of companies even those that have a low brand image or are not well known in the labor market (Cober et al., 2000). A third advantage of using Internet job boards is the fact that many of them have built in search capabilities that allow employers to scan volume of resumes based on key criteria (e.g., education, previous work experience, skills and abilities, etc.). As a result, these systems help organizations eliminate unqualified applicants or identify applicants' skill sets needed for the job.

Disadvantages of Internet job boards. One disadvantage of using the Internet job boards is the possible constraints found in the applicant's resumes. If any resumes contain a misspelled word or if the employer uses limited key words the search process, the resumes of many qualified applicants will be eliminated (Bernardin, 2003; Mohammed, Orife, & Wibowo, 2002). In particular, if a company is looking for people with human resources experience and only use the terms "human resources" rather than "personnel or other related words" they may artificially limit the results of the search process. In addition, some resume scanning software may read dates incorrectly. For instance, if an applicant list start and finish dates for their earned degrees, the system may eliminate such qualified people from their search due to the fact that many systems identifies the degrees as unfinished. Thus, the use of resume scanning systems may be too rigid and results in large numbers of classification errors.

Another disadvantage of the use of Internet job boards is that organizations must often

pay a large fee for using these systems and gaining access to applicants' resumes. As noted on the homepage for Monster.com, as of March 2007, an employer has to pay $449.00 for one job posting for 60 days. In addition, another disadvantage is the generic format that employers must use to post job openings. The generic format may limit the amount of information that can be provided about the job and organization as well as the attractiveness of the company's job posting because every posting may look like all others (Bernardin, 2003). These limitations may produce a large applicant pool who knows very little about the specific company or jobs being displayed. Another word of caution is the fact that many Internet job boards may go out of business or be sold to other companies, so organizations need to consider system longevity when choosing which job board to use. Lastly, another disadvantage is the fact that offering features such as company profiles and links to corporate websites is not always standard on Internet job boards.

Web-based Databases

Another method of online recruitment is the use of web-based databases. This option allows companies to pay a fee and gain access to databases filled with applicants without having post their job openings (Heneman & Judge, 2006). Many of the internet job boards, such as Monster.com offer such a service.

Advantages of web-based databases. One advantage of using these systems is that organizations may search the database with key words or strings of key words in order to find applicants that match their specific job requirements. Given that the databases only contains the resumes of numerous job seekers and no actual job posting, the job seeker may not be able to manage the impression that their career goals match the goals of the organization – they can only project their true career goal and aspirations. Thus, organizations may gain more accurate information about applicants' goals and interests, and this helps in finding candidates match job and organizational requirements. For instance, Yahoo! has a career center that has about over 2 million resumes which are funneled into a database that employers can search if they choose to purchase this option (Heneman & Judge, 2006). Similarly, many universities and colleges have begun to implement databases that allow employers to search for potential candidates that fit with their organization. As a result, the use of these databases enables the organization to gain more control of the recruitment process.

A second advantage of this method is the job seeker who post their resumes on these databases may be more open to various types of openings and companies. As a result, organizations may have a greater chance of recruiting these applicants than those who are only considering specific companies.

Disadvantages of web-based databases. One obvious disadvantage of this approach is the fee charged for access to the system. For example, on the homepage for Monster.com as of March 2007, the fee to look for resumes for a two week period would cost $975.00 if searching nationally and you are limited to viewing 500 resumes, or you can choose to search for resumes within a 100 mile radius of your company for $650.00 and the views are limited to 400. So these fees can be quite significant if organizations subscribe to numerous databases and they need to assess the extent to which these systems enable them to make successful placements.

As with any source of online recruitment, a second major disadvantage of using these databases is that applicants may self-select themselves in or out of these systems. Therefore, the quality and quantity of applicants may not be maximized using this particular method.

However, this approach could still be more cost effective when dealing with college and universities because it may eliminate the need for numerous campus visits, which is time-consuming as well as expensive if extensive travel is required.

Mining Databases

The final method of online recruiting is called mining databases (Heneman & Judge, 2004). The term mining database is not to be confused with datamining. It is a mere water-downed version of this technique. In the MIS literature, the purpose of datamining is to explore and analyze large amounts of data in databases to generate patterns usually through some type of statistical analysis (Chien & Chen, in press). It appears in the area of human resources the term mining databases is used to describe when recruiters are looking for basic contact information of potential applicants through non-traditional, yet sometimes highly suspect, ways. This type of online recruiting is highly debated because it is associated with terms "flipping and peeling" (Collier, 2007; Stamp, 2003; Weis, 2007) which will be described below.

Peeling is used in order to obtain information recruiters can use to develop leads of people that fit current job openings that would not necessarily by accessible otherwise. If one "peelsback" a web address, you use the web address and delete part of it to peel back the layers in order to find usable information about applicants (Collier, 2007; Stamp, 2003). For example, if recruiters locate an individual's profile that is part of the company's website and determines the person has the qualifications needed for a job they may try to peel back the layers of the web address to identify other individuals (Collier, 2007). For example, if a website is listed as www.123ABCompany.com/deptmembers/JDoe the recruiter might delete the JDoe section (or peel it back) to see what leads would be generated by simply looking under the folder titled, deptmembers. If the recruiter receives an unauthorized message he/she can simply go into any major search engine, such as Altavista or Google and type in the search box items such as "host: 123ABCcompany.com and the URL: deptmembers", and see what results are produced. Often times this peeling back approach may produce results that give us last name of employees, departments, or their direct employee pages listed on the company websites (Collier, 2007). This is a very roundabout way of finding candidates but if organizations need highly specialized people this may prove to be an avenue to explore.

Flipping is used to locate potential candidates by using the relationships between web pages and how they are hyperlinked to other websites (Alexander, 1998; Stamp, 2003). Many people are currently creating their own personal webpage that may list his/her achievements, professional associations, or alumni pages, or websumes (electronic resumes) that may link their work experience, degrees, awards, or other achievements to other web pages (i.e. school attended, past companies worked for, etc.) (Weis, 2007). For example, if an individual has work experience with a particular company, ABC123 company you can simply query this information using a search engine (i.e., Google, Altavista), "link: ABC123.com", to pull up all webpages that link to this specific company, ABC123. This should produce people who have worked for the company or had business with them as a client or customer. If the link to this specific company is linked to several personal webpages it could generate a wealth of knowledge such as their personal qualifications or current job title.

Advantages of mining databases. One advantage of this form of online recruitment method is that employers might find numerous, highly qualified who may be passive job seekers that have not publicly posted their intentions to look for alternative job opportunities (Alexander, 1998). In addition, the employer may be able to target very specialized skill sets or specialized work experience that may not be available on Internet job boards or through other traditional

methods.

Disadvantages of mining databases. Despite these advantages, one major disadvantage of this approach is that some people believe it is unethical. For example, people who are contacted for job opportunities through this means may feel uneasy about how their profiles were obtained (Alexander, 1998). In addition, some may perceive their privacy has been violated by organizations that gather personal data without their consent. However, many recruiters argue that public webpages are in the public domain and the personal webpage should have been more cautious in the creating and linking of their personal webpages to other sites (Weis, 2007).

However, if applicants perceive their privacy has been invaded they may be less interested in working for an organization that uses recruiting methods such as flipping and peeling than those that use other methods of online recruiting. The uses of flipping and peeling may also have an impact on company image especially when the public believes the organization has gained access to data without their permission. Current employees, customers, or job seekers may form negative images of a company if they use such means of gaining access to data and job applicants.

A second disadvantage of using peeling and flipping is the time and skill needed to drill down, peel back, or flip websites to find potential job applicants. Recruiters who use these methods will have to have high levels of technical skills. In addition, these methods may actually slow down the recruitment process and could result in wasted time and dead end searches. Thus, organizations really need to consider the potential drawbacks of using these techniques and the lasting consequences they may produce.

THE EXTENT TO WHICH ONLINE RECRUITMENT ENABLE ORGANIZATIONS TO MEET THEIR RECRUITMENT OBJECTIVES

As mentioned previously, it can be argued that the effectiveness of online recruitment depends on the extent to which it enables the organization to meet its recruitment objectives. The model of recruitment developed by Breaugh and Starke (2000) suggests there are a number of objectives or goals of the recruitment process which include (a) cost of recruitment, (b) speed of filling job vacancies, (c) employee satisfaction and retention rates, (d) quality and quantity of applicants, and (e) diversity of applicants. The potential effects of online recruitment on each of these objectives or goals will be considered in the sections that follow.

Cost of filling the job

One recruitment objective is to minimize the cost of filling the job (Breaugh & Starke, 2000). Not surprisingly, results of research have consistently shown that the use of online recruitment reduces the cost of recruitment in organizations (Cappelli, 2001; Chapman & Webster, 2003; Galanaki, 2002). For instance, some estimates indicate that the cost of online recruitment is $900 as compared to $8,000 to $10,000 for traditional systems (Cober et al., 2000). Other estimates show that online recruitment can reduces expenses by $1,200 per employee when compared to using more traditional sources (Kay, 2000). Furthermore, results of research shows that compared to newspaper ads, online recruitment cost per hire drops from $4,000 to $1,400 (Marcus, 2001 as cited in Braddy et al., 2003). In addition, still other reports indicate that online recruiting costs 95 percent less than traditional recruiting sources (e.g., classified ads). However, despite the fact that online recruitment may lower recruitment costs, organizations should not assume that the use online recruitment will save their particular

organization money. Organizations need to consider the degree to which this method is appropriate for their particular company. For example, organizations need to assess how resumes will be processed or screened to rule out unqualified applicants. Failure to consider any of these issues may easily generate more administrative burdens for the human resource department or departmental managers, which would offset the cost savings of using this method. Finally, organizations need to track the effectiveness of the online recruitment method to assess the yield ratios and placements made. Recall that tracking the number of hits on a website is only part of measuring effectiveness (Cober et al., 2000). It should be apparent from the review just noted that online recruitment can result in cost savings, however, organizations need to identify the new processes associated with online recruitment, and evaluate the effectiveness of using this recruitment source.

Speed of Filling Job Vacancies

Another recruitment objective for assessing the effectiveness of recruitment is the speed of filling the job vacancy (Breaugh & Starke, 2000). Considerable research shows that online recruitment can decrease cycle time (Cardy & Miller, 2003; Chapman & Webster, 2003; Cober et al., 2003). Furthermore, research shows that online recruitment can streamline and increase the efficiency of the process by allowing organizations to spend less time gathering and sorting data (Web Recruiting Advantages, 2001 as cited in Braddy et al., 2003). These systems are also thought to greatly reduce the amount of paper processed (Zall, 2000). For instance, online systems helped Cisco Systems attract more than 500,000 individuals in one month and enabled them to hire 1,200 people in three months time (Cober et al., 2000). One particular study examined the 50 of the Fortune 500 companies and found that through the use of online recruitment the companies were able to cut the hiring cycle time of 43 days by six days, and cut four days off the application process (Recruitsoft/iLogos cited in Cappelli, 2001). In addition, some other research shows that firms can reduce hiring cycle times by 25 percent when using online recruitment (Cober et al., 2000).

Although, the research shows that online recruiting can decrease the cycle time and enhance the speed with which vacancies are filled, one issue is whether the reduction in cycle time still enables organizations to hire the most qualified employees. Thus, even though an organization may realize the benefits of a shortened cycle time, it remains to be seen if these benefits are long-lasting in organizations. Additional research is needed to examine these issues.

Employee Satisfaction and Retention Rates

Two other important goals of the recruitment process are to enhance employee satisfaction levels and retention rates (Breaugh & Starke, 2000). Thus, it is important to determine whether online recruitment can help an organization increase the satisfaction and retention rates for individuals. One particular issue that helps organizations meet these objectives is the message conveyed by the recruitment process.

Message conveyed through online recruitment. It has long been argued that the message conveyed in the recruitment process may affect applicants' reactions and job choice decisions (Rynes, 1991). According to Heneman and Judge (2006) there are three different types of messages that an organization can use when communicating recruitment information to applicants. For instance, an organization may use: a) a realistic recruitment message, b) employment brand message, or c) a targeted message.

Realistic recruitment message. A realistic recruitment message is one that describes the organization and job as they truly are (Heneman & Judge, 2006). It does not sugar coat the job or organization but tries to be very direct and upfront in providing accurate and realistic information. A realistic job preview is one such example. A realistic job preview is when an applicant is given positive and negative attributes of a job they are applying to see if this job is truly what they desire or thought it was (Wanous, 1992). Online recruitment facilitates the realistic job previews in several ways. For example, realistic preview information can be communicated through on recruitment websites. Online systems may provide applicants with a virtual preview of what it is like to work for the organizations. For instance, some companies use video clips or webcams that allow candidates to view what it is like to work for the organization in real time. Other companies allow applicants to interact with current employees to gain realistic information about what it is like to work for the company. One example of a company that uses this feature is Cisco Systems which offers online applicants a chance to “Make a Friend at Cisco”. This allows the applicant to communicate with someone inside Cisco who can describe what it is like to work for the organization (Cascio, 1998).

Apart from providing a realistic job preview, the use of the web allows an organization to provide a realistic culture preview ((Heneman & Judge, 2006). A realistic culture preview allows an organization to expand beyond the traditional job information and provide information about the company philosophy, value systems, history, diversity, salary, and benefits. Many companies are taking advantage and posting such information on their websites (Cober et al, 2003; McCourt-Mooney, 2000). For instance, research by Cober et al. (2003) found that communicating information about salary and advancement opportunities on a website had a positive effect on applicants’ attraction to organizations. Mohamed et al. (2002) found posting job descriptions and salary levels may also he helpful in attracting potential job candidates. Furthermore, research shows that the use of a realistic culture preview can be very helpful since often times applicants are attracted to jobs and organizations that best fit with their own personal views and beliefs (Dineen, Ash, & Noe, 2002). Research has revealed that applicants feel they have a better chance of collecting realistic information from websites than traditional sources (Rozelle & Landis, 2002).

Overall, the use of realistic recruitment message in online recruitment should enable organizations to increase the satisfaction and retention levels of employees. Realistic recruitment messages should help organizations attract applicants who possess the skills and values that are aligned with those of the company. Furthermore online previews may help job seekers self select themselves out of the applicant pool because they know they will not be happy with the position in the organizations.

Employment brand messages. Another way to communicate information to potential applicants is through messages that convey their employment brand. A company’s employment brand can lure applicants based on the organization’s well-known values, or distinctive image and culture (i.e., Southwest Airlines, Walt Disney World). An employment brand can be very useful in differentiating an organization from their competitors (Ulrich, 2001; Stone, Stone-Romero, & Lukaszewski, 2003) or it can aid in portraying a particular image to potential job candidates (Galanaki, 2002). For instance, Cisco Systems uses its image of being technological advanced and therefore only recruit employees only through the Internet, as is the case with many high-tech firms (Cascio, 1998).

Research shows that the use of online recruitment can help some organizations create a specific brand identity in the labor market (Chapman & Webster, 2003; Ulrich, 2001). Furthermore, the use of online recruitment automatically projects the image that the

organization is innovative, up to date, flexible, and progressive (Chapman & Webster, 2003). In addition, many companies are developing elaborate websites to establish and project a specific image to potential candidates. For example, on the Johnson & Johnson website (www.jnj.com/careers/global.htm) they brand themselves "the small company environment: big company impact" to attract individuals who are familiar with their brand but don't want to get lose among the number of employees. The use of the company brand, itself, is another way that companies link employment opportunities to their products and services. This strategy allows organizations to attract applicants who are familiar with the company's products, but possible never thought about the company's employment opportunities.

Overall, the use of an employment brand message communicated through online recruitment may help organizations increase employee satisfaction levels and retention rates. Some analysts argue that organizations can use online recruiting to position themselves based on their reputation and values, and to attract applicants that are committed to similar values and beliefs. The use of employment brand can also be beneficial in creating a pool of applicant who has some level of familiarity, and even loyalty, to the company products and services.

Targeted messages. The last type of message that could be used in online recruitment is the targeted message. A targeted message is one that focuses on a particular group of people (Heneman & Judge, 2006). Through the use of online recruitment an organization can customize their messages for different groups of applicants. This can be very beneficial because the targeted information may provide specific information about career opportunities for different positions. Furthermore, online recruiting messages can be targeted to specific professional groups (e.g., electrical engineers, biotechnical specialists, software engineers, pediatric physicians).

It can be argued that the use of online targeted messages may help organizations increase the satisfaction levels and retention rates of employees. The primary reason for this is that targeted messages may provide the information needed by applicants to make informed decisions about job and career opportunities in specialized areas.

Overall, the message conveyed through online recruitment may be an important determinant of applicants' attraction to organizations and subsequent satisfaction and retention rates. Future research is needed in this area to see how the various types of messages are supporting these recruitment objectives.

Quantity, Quality, and Diversity of Applicants

The quantity, quality, and diversity of applicants are three other important goals of the recruitment process (Breaugh & Stark, 2000). It is clear that many job seekers are using online systems to search for jobs and gather information about job openings in organizations. Thus, one of the advantages of using online recruitment is that it can cast a wide net and attract a large number of job applicants (Cappelli, 20001; Chapman & Webster, 2003; Galanaki, 2002). However, research also shows that although online recruitment may attract greater quantities of applicants it may not always attract higher quality applicants or generate a diverse applicant pool (Buckley et al., 2004; Chapman & Webster, 2003).

Quantity of Applicants. As noted previously, online recruitment is available to applicants 24 hours per day and 7 days a week. Applicants may simply fill out an online application or upload a resume for various positions in a split second and not assess whether they are actually qualified for jobs. Therefore, it is not surprising that a large volume of applicants is received by

any given organization. As mentioned earlier, many organizations are using resume management systems that allow for key words searches to scale down the large volume of applications received via online recruitment. The use of resume scanning systems enables companies to screen for particular degrees, skills, education, etc. However, there is some research that cautions organizations about the use of key word searches. In particular, Mohamed et al. (2002) maintained that the criteria used in key word searches may not always be job related. In addition, these authors state the applicants may tailor the content of their resumes to words in the job descriptions in order to enhance their changes of passing the resume screening systems. As a result, organizations may select candidates who use the right words, but are not necessarily those most qualified for jobs. Therefore, organizations need to be concerned with the quality of the numerous applicants received.

Quality and Diversity of Applicants. The quality and diversity of the applicant pool are obviously driven by the users of online recruitment. Therefore, it is beneficial to present the research findings about the users of online recruitment as well as how the website attributes affect job seekers to see if these recruitment objectives are being met through online recruitment. This section will address a) personal characteristics, b) individual difference by ethnicity, c) individual differences by age and gender, and d) website attributes on attraction on attraction to organizations.

Personal Characteristics. Some research show that online recruitment systems place artificial limits on the applicant pool. For instance, research by McManus and Ferguson (2003) found that applicants who apply for jobs online are typically computer literate, well-educated, seeking relatively high-level jobs. In addition, results of research have revealed that those individuals who apply for jobs typically have high levels of drive and achievement, but are often job hoppers. In particular, McManus and Ferguson (2003) found that 35 percent of those recruited online had held an average of three or more jobs over a five-year period. Other research indicates that job seekers with low levels of computer anxiety or high levels of computer self-efficacy are more likely to use online recruiting systems than others (Marakas, Yi, & Johnson, 1998). Research also found college students preferred to use online recruitment as compared to other sources (Zusman & Landis, 2002). Taken together this research shows that online recruitment typically attracts applicants who are highly educated, computer savvy, with high levels of drive and achievement. However, these systems also attract individuals who are job hoppers and may serve as a barrier for those applicants with computer anxiety and low computer efficacy.

Ethnic Differences. Research by Kuhn & Skuterud (2000) has suggested there are ethnic differences in the use of online recruiting. For example, research of their research found that the usage rate for online recruitment was 7 percent of Hispanics, 9 percent of blacks, and 16 percent of whites using online recruitment. McManus and Ferguson (2003) found quite similar results in their research. They found that white candidates were more likely to use online recruitment than members of some minority groups (Hispanic Americans).

Other research offered more contradictory results about the extent to which ethnic minorities use online recruitment. For example, Sinar & Reynolds (2001) found that ethnic minorities often react quite favorably to online recruiting and use it to self-select themselves out of the application process. One possible reason for this is that African-Americans may perceive that online recruiting is less likely to be discriminatory than other recruitment sources (Stone et al., 2005). However, research has consistently shown that Hispanic-Americans are less likely than members of other ethnic groups to use online recruitment. Although researchers have not been able to explain the low usage rates among Hispanics, some researchers suggest that lack

of access to computers, lack of computer skills, and poverty contribute to the low usage rates (Kuhn & Skuterud, 2000). Other researchers have argued that cultural differences may affect Hispanics use of online recruiting systems (Stone et al., 2005).

Gender and Age Differences. Recent findings show that employed men are more likely to search for jobs on the Internet than employed women (Kuhn & Skuterud, 2000). Research also shows that candidates who are 55 years of age and older are less likely to use the Internet as a recruitment source for jobs than younger candidates (McManus & Ferguson, 2003). Thus, the use of online recruitment may artificially limit the extent to which an organization attracts qualified women and older workers.

Website Attributes. Some researchers have argued that website attributes themselves may affect applicants' attraction to an organization and the extent to which they apply for job (Zusman & Landis, 2002). As a result, organizations are developing elaborate websites that are highly attractive and easy to use (Zusman & Landis, 2002). Although it seems plausible that the design of websites may affect attraction to organizations, results of research on this topic have been mixed (Zusman & Landis, 2003). For instance, some research has shown that applicants prefer companies with high quality websites (Zusman & Landis, 2002); and applicants' impressions are influenced by website designs (Scheu, Ryan & Nona, 1999). On the other hand, results of research by Cober et al. (2003) found that the attractiveness of websites had little or no influence on applicants' attraction to organizations. Cober et al. argued that information contained in the website (e.g., benefits and advantages of working for the organization) was a more important determinant of job choice than the attractiveness of the website.

Apart from the attractiveness of the website, the speed and the ease of using the website were two other attributes thought to affect attraction to organizations. Results of research by Cober et al. (2003) suggested the speed with which websites can be navigated and ease-of-use of the website does affect applicants' attitudes toward the organization. Furthermore, studies have consistently shown that applicants are more likely to apply for jobs when the website is easy to navigate than when it is not (Sinar, Paquet, & Reynolds, 2003; Williamson, Lepak, & King, 2003). In addition, research shows that inexperienced job applicants are more likely to be influenced by the attributes of the website than applicants with job experience (Sinar et al., 2003).

In summary, it is clear that online recruitment may help organizations meet the objective of increasing the number of job applicants (Chapman & Webster, 2003; Galanaki, 2002). However, research on the impact of online recruitment on quality of applicants has been somewhat mixed. If an organization is looking for job applicants with particular personal characteristics (e.g., computer skills, high education, and drive levels) then they may be able to attract high quality applicants with online recruitment. However, the use of online recruitment may also have some drawbacks. For instance, online recruiting may attract individuals who are frequent job hoppers and may be less likely to attract those with low level of computer self efface. Furthermore, online recruitment may have a negative impact on the extent to which organizations are able to attract women, older workers, and some minorities (e.g., Hispanic Americans). However, research is not clear about the extent to which online recruitment helps organizations attract African-Americans. Thus, additional research is needed to assess the degree to which online recruitment enables organizations to attract members of this group.

Given that online recruitment may not help organizations meet their diversity-related goals, organizations need to be very cautious about using online recruitment as their own

source of recruitment. Such systems may have an adverse impact on women, minorities, and older applicants, and pose potential legal problems for organizations (Hogler, Henle, & Beamus, 2001). Therefore, it is imperative that organizations consider potential legal issues associated with the use of online recruitment and ensure that all applicants are given the opportunity to apply for jobs (Stone et al., 2003). Furthermore, it can be argued that organizations might want to use online recruitment in conjunction with other recruitment sources (e.g., newspaper ads, job fairs) to ensure that their recruitment processes are fair.

SUMMARY

In summary, it is evident that there are a number of forms of online recruitment, and each form has advantages and disadvantages. Thus, organizations may want to consider these benefits and costs when implementing online recruitment systems. Similarly, organizations should consider the extent to which online recruitment enables them to meet their recruitment objectives. As noted above, research has shown that online recruitment can help organizations reduce the costs of recruiting, decrease the cycle time of filling job vacancies, and generate large quantities of applicants. However, organizations must remember that these are only three of many recruitment objectives. As a result, organizations should also consider the extent to which online recruitment enables them to (a) attract highly qualified applicants, (b) enhance employee satisfaction and retention rates, and (c) increase the diversity of their workforces.\

As noted in the review above, research shows that online recruitment may increase the quantity of applicants, but may not always enhance the quality of applicants. Furthermore, research shows that the use of specialized job boards may enable organizations to attract applicants with higher levels of education than general job boards (Jattuso & Sinar, 2003). In addition, online applicants tend to be described as driven, persistent, with high levels of computer skills (McManus & Fergusen, 2003). Despite the fact that online recruiting appears to attract well-educated persistent applicants, the research shows that online recruiting is also more likely to attract job hoppers than traditional recruitment sources (McManus & Ferguson, 2003). As a result, organizations that are concerned with increasing retention rates may find this method as problematic.

Apart from the quantity of applicants, the review above notes that in some cases online recruitment may help organizations enhance the satisfaction and retention levels of employees. For instance, when online recruitment is used to provide realistic previews about working in the organization it may increase employees' satisfaction and retention levels. These systems may also help organizations attract individuals by using messages than convey "brand identity."

Finally, the review just noted, examined the extent to which online recruitment might help organizations increase the diversity of their workforces. The research reviewed suggests that there may be age, gender, and ethnic differences in the use of online recruiting. Note, however, that the research results are inconclusive on whether African-Americans are more likely or less likely to use online recruiting. Despite these mixed findings, it appears that online recruiting may inadvertently limit the extent to which organizations are able to recruit women, older workers, and Hispanic-Americans. Thus, online recruitment may not be the best strategy for increasing the diversity of an organization's workforce.

IMPLICATIONS FOR FUTURE RESEARCH

Although there has been some research on the topic online recruitment, additional research is needed to examine the advantages and disadvantages of various forms of e-

recruiting. Likewise, additional research is needed to assess the extent to which online recruiting enables organizations to meet their recruitment goals. One area of research that is needed is an assessment of the type of message conveyed by online recruiting. The choice of which message to use might be influenced by the status of the labor market. If the labor market is tight, then organizations might want to avoid the use of realistic messages because these messages decrease the extent to which applicants apply for jobs (Heneman & Judge, 2006). In a tight labor market the use of a targeted or employment brand message might be most effective. When the market is abundant, a realistic message might be more effective than targeted or employment brand messages. One of the key advantages of using online recruitment is that these systems are very flexible and the messages can be changed to fit the specific labor market. Although these arguments are plausible, research is needed to examine the extent to which the message used in online recruitment affects individuals' attraction to organizations and subsequent retention rates.

Another important area for research is why minority usage of online recruitment is so low. Although some researchers have argued that lack of access to computers and low computer self-efficacy may be two sources of the problem, there may be other reasons that minorities do not use online recruiting. For instance, some researchers have argued that applicants with high levels of relationship oriented values (e.g., women, Hispanic-Americans) may be less likely to use impersonal online recruitment sources than more personal recruitment sources (Stone, Johnson, Navas, & Stone-Romero, 2005). However, future research on the effects of online on the attraction of diverse applicants is needed because the population is becoming more diverse, and organizations may want to ensure their recruitment sources attract all qualified applicants in the labor market.

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