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Knowledge Flows and Insider Trading[1]

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Abstract:
Much insider trading literature focuses on the redistribution of monetary rents. This focus has led to ambiguous and conflicting results, unable to identify who the clear winners and losers of insider trading legislation are. Lacking any clearly defined beneficiary, an analysis of the origins and continued support of such legislation is lacking. This paper rectifies this omission by reassessing the involved agents not in light of their relationship to a company, but from all roles of the knowledge transmission process: creator, distributor and user. Information distributors – large news companies and investment houses – are argued to be sufficiently well organized to lobby for maintained and strengthened legislation to protect rents that would otherwise be greatly diminished.

Keywords: insider information, asymmetric information, redistribution, regulatory environment
JEL Classification: D72, D82, G14, K22

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Knowledge Flows and Insider Trading

1 Introduction

The literature remains mired with ambiguous conclusions as to what parties benefit through insider trading (IT) legislation. Theories relying on the doctrines of private property, fairness, ethics or market efficiency have led to conflicting empirical results. The sources of support or opposition for insider trading legislation remain hotly contested.

Two factors best explain these apparent ambiguities. The first is the use of the redistribution of monetary rents as the focal point of analysis instead of an approach grounded in the more fundamental issue: the redistribution of information. Second, current cost-benefit analyses are based on an analysis of the different users of inside information: insiders versus outsiders. The continuum of agents that we can consider "insiders" creates a significant grey area, with little objective criteria distinguishing certain groups. Herein, we provide a more apt distinction based on the role that agents play in the knowledge creation process. Specific issues within the broader scope of insider trading can be analyzed through a trichotomy of agents enacting this process: information creators, distributors, and users.

Despite conflicts and ambiguities in the research to date, one empirical fact remains clear: insider trading laws do not result in any clearly defined winners or losers. While certain conditions point to a redistribution of traditional "insider" profits to "outsiders", the results are difficult to replicate. The ambiguity between insiders and outsiders creates difficulties when trying to discern not only which group benefits from such legislation, but also what agents belong to each group. Lacking a clearly defined group to support insider trading legislation, the existence and continued support of insider trading laws in their varied forms creates a paradox.

We rectify this paradox of support by shifting the cost-benefit analysis away from the distinction between company insiders and outsiders, and towards the roles of creators, distributors and users of the information in question.

2 Ambiguous results and conflicting support

Most countries today enforce some degree of IT legislation. In the United States the Securities Exchange Comission (SEC) enforces this legislation, which falls under section 14(e) of the Securities Exchange Act of 1934. Formed in the midst of the Great Depression, regulators saw what appeared to be inefficient financial markets breeding an atmosphere of increased desire for consumer (i.e., shareholder) protection. The SEC defines "insiders" as officers and directors of a company, or those owners of more than 10 percent of the company's equity. The law bans insiders from trading on material information the public does not yet know about, as well as the disclosure of this information to unique individuals before the general public.

Unlike other facets of business laws that are largely standardized internationally, insider trading legislation exists in a myriad of forms. While few countries lack any IT legislation (Bulgaria, Swaziland and Kuwait are among the few exceptions), most countries fall into a middle ground. Laws exist which are either less stringent than in America, or are equally stringent but only loosely enforced (as is the case in Austria, Ireland, New Zealand, and Russia).

Economists generally treat redistribution in monetary terms. Analyses of tax schemes, for example, have wealth from one set of agents (households) redistributed to another set of agents (government). The analysis of insider trading commonly follows this pattern, treating the *raison d'être* for insider trading legislation as the safeguarding of rents resulting from the information generated within a company for the company's owners. As goes the common rationale for the existence of IT legislation, property rights to this inside information must be enforced to maintain a proper distribution of rents accruing to the company's shareholders.

Any redistribution analysis must pay heed to both the gains and losses incurred by the relevant parties. As the gains and losses from insider trading are not so clear, much ambiguous and conflicting literature results. These ambiguities are also of practical importance. For example, while legislators impose these laws to protect shareholder profits, evidence points to insiders continuing to enjoy above-average profits. This tendency exists in even the most strictly enforced regimes, including both America (Jeng, Metrick and Zeckhauser 1999) and Europe (Bris 2005).

Manne (1966a; b) argues that there is no clearly defined gain from insider trading; it is only an added compensation type. If insiders cannot be rewarded via the ability to use inside information, a strong adverse selection problem exists: salaries increased to compensate for the inability to partake in insider trading will allow managers who "cheat" by trading to be overcompensated (Easterbrook 1985: 94). Consequently, to avoid overcompensating dishonest employees, firms will reduce all salaries accordingly.[2]

Despite the odds favoring insiders using inside information profitably, evidence also abounds that market professionals (i.e., outsiders, typically large investment firms) support and profit from IT legislation at these insiders' own expense (Haddock and Macey 1987; Georgakopoulos 1993; Shin 1996; Goshen and Parchomovsky 2000). The leveling of the informational playing field allows professionals to compete against insiders for the large potential profits that inside information permits. Whether professionals would profit from this

[2] Varied empirical results reflect these theoretical conflicts. Evidence from Bettis, Ducan and Harmon (1998) and Durnev and Nain (2005) confirm that insiders continue to earn gains through the use of non-public information. In contrast, Carlton and Fischel (1983) find alternative evidence that management fails to profit through insider trading, instead settling for reduced salaries.

information lacking IT legislation is far less certain.

Finally, shareholders are commonly thought to require and support IT legislation in order to sanction managers who fail to pursue profit-enhancing activities. In contrast, Padilla (2002; 2005) points out that shareholders still decide who is entitled to trade on insider information and who is not. Even large firms held by widely dispersed shareholders are closely monitored and management is forced to comply with the will of their shareholders (Alchian and Demsetz 1972; Shleifer and Vishny 1986). Takeovers provide an example of an effective control mechanism to ensure that management maximizes shareholder value (Manne 1965: 112). It follows that shareholders need not be strongly organized to prohibit company insiders from abusing their power. Sufficiently strong interest groups within the ownership structure can exercise control over management.

While these explanations for shareholder support of IT legislation seem plausible, there is opposing evidence. For example, the continued existence of insider trading imposes additional costs on shareholders who bear the costs of the creation of information while company insiders continue to enjoy the benefits (Bebchuk and Jolls 1999). If insiders continue to profit from inside information, shareholders would benefit more by permitting insider trading and compensating salaries accordingly (à la Manne 1996a) to account for this seized profit potential.

With so much conflicting theory and evidence, it is difficult to identify just who it is that supports the continued existence of IT legislation. One significant theoretical failing is a preoccupation with the redistribution of monetary rents at the expense of attention to the redistribution of the information that permits these rents. Perhaps most troubling is the arbitrary distinction between insiders and outsiders. Many different levels of insiders can be identified (Beny 2002: 6). For example, senior management may hire consulting lawyers to advise them on an impending merger. While both parties will be privy to insider information, only management is directly employed by the firm (and responsible to shareholders) while the lawyers are merely under contract. The grey area defining groups of relevant actors must be rectified if consistent and coherent progress is to be made.

3 Insiders v. outsiders reconsidered

Both consumer and producer interests receive due consideration in regulatory decision-making (Keeler 1984; Primaux *et al.* 1984; Becker 1986). Rectifying the ambiguous problem of who insiders are furthers this consumer-producer approach by focusing on information flows. We define company insiders as any individual who personally *creates* insider information. Market professionals employed at investment firms are widely defined as any agent that uses this information. These professionals are not employed, nor are they owners, of the firm in question (i.e., they are outsiders). They are users of information with no specific attachment to the company – usually large stockbrokers or institutional traders.

Haddock and Macey (1987) treat the impetus of IT legislation as the trade-off between different levels of political bargaining power. In an extension of a Peltzman's (1976) political support model, two sets of agents – company insiders and market professionals – compete with one another in their relative support and opposition to IT legislation. In figure 1 we generalize the limits of and incentives for one level of support over another.

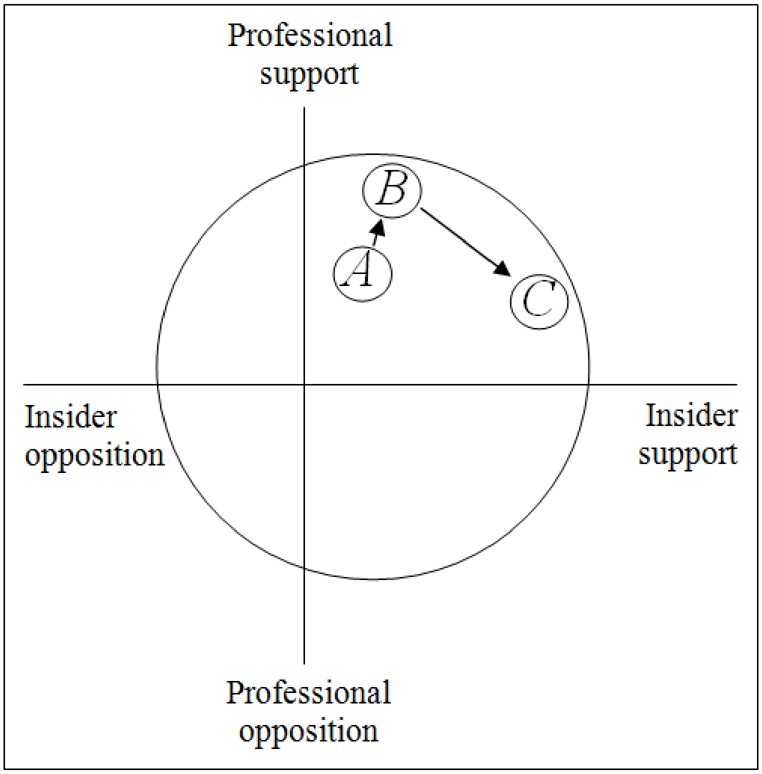

Figure 1: Insider Trading Political Opportunity Set
Source: Haddock and Macey (1987)

Support and opposition for IT legislation by the relevant parties is given on the *x*- and *y*-axes. The outer boundary provides the legal limit to support for IT legislation, or the extent that it can be enforced. The judicial system defines and controls this boundary, generally through precedent.[3] Thus, the extent to which IT legislation can be passed into law (and hence enforced) is set judicially, proximity to the boundary the law's scope will reach is determined by the distinct bargaining powers of the interest groups. More expansive and broad-based IT legislation will only reach its maximum level of codification into law to the extent that the precedents of the judicial system allow it to – lobbying interests, however strong, are limited in the extent that they

[3] The extent to which these laws are enforced is not uniform. Roe (2000) finds that left-leaning governments favor the redistribution of property rights (including insider information) away from capital owners and into the hands of employees. Alternatively, corrupt regimes tend to be more insider-based than less corrupt regimes (Polinsky and Shavell 2001; Beny 2002: 21).

will see their legislative desires fulfilled.

IT legislation level *B* dominates *A* if both professionals and insiders offer more support for this legislation than the current law allows for. A move from *B* to *C* depends on the influence that each party can wield within the judicial and political system. For example, if market professionals are more influential than insiders, they may be able to attain their desired level of regulation despite the wishes of the insiders. The ultimate level of regulation will depend not only on the demands of each party, but also on their respective bargaining powers.

Although conceptually attractive, the Haddock and Macey model as presented lacks in two areas. First, it assumes that the parties involved are binary – insiders and professionals. It excludes different groups from analysis, outsiders in the form of small individual investors, for example.[4] Second, the model does little to explain where the sources of relative bargaining influence originate. A hierarchy *does* exist due to organizationally derived bargaining power. The level of influence and bargaining power generally descends as you move through the list of agents: management, professionals and investors.

Two factors jointly establish the relative effort that each group will dedicate to lobbying for their preferred regulatory position.

On the one side is the benefit (both relative and marginal) that each group expects to obtain. This is negatively related to the number of agents contained within the set. Due to their sheer numbers, investors each stand to benefit very little at the margin from increased access to inside information. Management, the smallest group numerically, has the largest marginal benefit as inside information can be concentrated in the hands of a very limited number of individuals if not regulated. Market professionals fall somewhere between these two groups.

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[4] Haddock and Macey (1987: 324) note that the inclusion of individual investors could be rendered with a third axis to include individual investors and could be "imagined as a pancake – broad and wide but rather thin." The weak organization and influence of the individual investors gives them little influence compared to the other two groups.

The other side of the issue is the relative organization and resultant bargaining power that generally decreases as membership increases. Investors are poorly organized and wield little political authority. The masses, despite their potential for high influence due to large numbers, are unable to organize effectively as the costs of doing so outweigh the benefits each member expects to receive (Olson 1969). Consequently, a small group favoring an inefficient policy can still realize their goal if they exert more political influence than a larger competing group (Becker 1983).

Investors commonly utilize the services of market professionals through investment firms for their security deals. Implicit in this act is the sacrifice of their political influence in the regulatory field. Investment firms gain this loss, obtaining greater political influence to set regulation than was previously available. This effect is magnified as their services will be partly chosen by the success they have in politically bargaining on behalf of their clients.

We can alter the political opportunity set in figure 1 to reflect the role that each group serves in the knowledge creation process. Information producers and users loosely align with the existing dichotomy of insiders and outsiders, but with several important differences. The same agent or group need not undertake both the creation of information and be the user of its subsequent knowledge. Consequently, due to the personal and subjective nature of knowledge, it is unclear with what success someone who is not the creator of its underlying information can effectively use it. Not only information but also an understanding of what it means is critical for its successful (i.e., profitable) use (Mayer 2005).[5] Regulation redistributes information but the understanding of what meaning its subsequent knowledge embodies is decidedly more difficult to transfer. If transmission perverts the meaning of knowledge, actions based upon it might

[5] Or, as Milton Friedman comments on the matter: "You want more insider trading, not less. You want to give the people most likely to have knowledge about deficiencies of the company an incentive to make the public aware of that" (as quoted in Harris 2003).

likewise be altered.[6] Indeed, the accumulation of knowledge is better defined as "an enhancement of our interpretive powers and our tacit understanding of an unfolding reality rather than the simple accumulation of data" (Lavoie 1985: 58). The mere accumulation of data is insufficient to increase our knowledge – we must also gain an understanding of the data's implications.

The unhindered transfer of information has several natural checks and balances that ensure its quality remains high. Information is transferred incrementally in small pieces allowing for rapid dispersion to the market (Hayek 1976: 116). Not all changes resulting from the transmission of information need be perfect. The important point is that competitive speculators continually strive to ensure that information of superior quality displaces that of inferior quality (Huerta de Soto 2010: chap. 2).

As managers are legislated to provide information to outsiders an important competitive check that breeds the tendency towards high quality information is removed. The result is that the information released by a company, or more correctly stated, the understanding thereof, may be of reduced quality and hence a less faithful representation of its underlying information than would be the case on the unhampered market.

Information creators consist primarily of insiders. Management creates information through the daily course of business activities. Normally they would act upon this information accordingly, if it was beneficial to do so (i.e., if their understanding of it deemed it profitable). IT legislation denies management these opportunities, forcing the information into the hands of

[6] Increases in knowledge can lead to corresponding increases in "confusion, ignorance, and conceit" (Taleb 2007: 138). This can be analogized to the pouring of red wine into a glass of water. At first the water will turn rose very quickly, but reach a saturation point whereby no effect will be elicited from additional wine. After they are mixed, we will be unable to tell which wine it is that colored the water, and which was added after the saturation point. Likewise, as new information is added to our existing knowledge we are unable to discern which increased the scope of our understanding, and which leads to new confusion surrounding the implications of the greater amount of knowledge we must act upon.

market professionals (through their employer investment firms) and individual investors. Individual investors rely ultimately on investment firms to organize and influence the extent of IT legislation for them. Despite being potential beneficiaries, individual investors sacrifice their influence to the better-organized investment firms. This results in two primary subjects in the political opportunity set consistent with Haddock and Macey (1987) – knowledge producers (primarily insiders) and users (primarily market professionals through their investment firms).

However, there exists a third group that is highly organized, influential and has clear benefits from strong IT legislation: information distributors. These distributors – typically large news groups and investment companies in their role of providing information to their clients – connect insiders that generate information with the outsiders who are legally allowed to act upon it. There are relatively few large-scale news outlets capable of disseminating this information. Their small numbers create a relative ease in politically organizing and lobbying for IT legislation. Distributors not only have the advantage of being well organized, but they are also in a position to gain clear rents from these laws. In fact, absent these regulations, their scope of profit opportunities would lack a whole avenue of business. Without IT legislation, the same agent that produces information would use it, leaving a reduced and limited need for intermediary distributors of information. To the extent that IT legislation exists and is enforced, an increased demand for the services for information intermediaries results.[7]

With the addition of the information distributors we can update the previous political opportunity set to include all parties privy to the information dissemination process. Information producers and users (insiders and market professionals) remain largely unaffected from the

[7] Absent IT regulation management would still use the services of investment houses for acting on inside information via securities deals. However, the investment houses still gain access to the information only after management has already acted upon it. By barring insiders from using the information they produce, investment houses are guaranteed first access to the information, and hence, the first opportunity to reap the benefits thereof.

original rendition. The addition of the third dimension of distributors allows us to analyze an added element. Many large investment firms not only trade directly upon information but also act as distributors of it for their clients. Thus, these companies benefit in two ways from their newly legislated role as primary information distributors.

The gain of information only provides the *potential* for profits. Even if the meaning embodied in this information is maintained to provide for these profits, the party with first access to it will still earn the rents. *Meaning*, in this case, is the ancillary facts that are instrumental to understanding the full importance of the newly created information. These additional facts are increasingly lost the further from the original producers the information recedes.[8] Individual investors will *not* be the first recipients of this information as it will still be distributed to them via an intermediary news agency and not directly from company insiders. As the transmission process perverts, reduces or losses the meaning of this information, individual investors are left with lower quality information to base their investment decisions on. Indeed, as Prechter (2001: 121) summarizes, the acceptance of information by investors without verifying its quality, "is not simply fairly common; it is ubiquitous. Most people get virtually all their ideas about financial markets from other people, through newspapers, television, tipsters, and analysts, without checking a thing. They think, "Who am I to check? These other people are supposed to be the experts."

News corporations gain accordingly from this newfound fountain of information. A new line of business opens itself to them as a body is necessary to transmit the information that insiders (knowledge producers) are barred from using to outsiders (information users) who are

[8] Howden (2010) invokes this argument to demonstrate why the banking system faces increasing data deterioration during an inflationary process. As knowledge of the source of additional credit in the banking system – whether savings or credit induced – is lost the further one is from the original source of the new credit (i.e., the central bank) less understanding is available as to the consequences and profit opportunities of this new credit.

the only ones legislated to act upon it. The largest group to benefit however is the investment institutions that not only act upon the additional information for their own purposes, but also release and transfer it to their clients via information updates (i.e., investment tips, newsletters, etc.). These companies get first use of the information, even before their individual clients gain access to it. By the time any regulated information reaches an individual client it will most likely have already been acted upon and its profit opportunities exploited. Investment companies thus have the appearance of helping their clients via rapid and pertinent information-dissemination, but the reality is much starker. This dissemination is of little value, the company having already exploited (at least to some degree) its worth. The information becomes a sales pitch, and gives small investors the illusion of having better access to information than others have. The illusion of better access to information is, however, just that: an illusion. While small investors of one investment firm may have better access to information than investors of a different firm, they will always be subordinate to the company that disseminates the information to them.

Additionally, information distributors face increasingly certain gains. Their profits do not depend solely on the newly accessed information used for their own trading purposes. Instead, they profit through the gains created by other investors acting upon this information. Any gain from information will be uncertain to an investor trying to estimate its value on the market. Distributors stand ready to earn a positive return from this information from the fees their clients incur by acting upon this information by purchasing or selling securities accordingly. Evidence suggests that the gains from prohibiting insider trading are not randomly distributed among investors (Macey 1991). Market professionals benefit disproportionately from these regulations as they are able to devote their careers to seeking and acquiring new information before other outsiders are able to.

Individual investors have little interest in IT regulations. They will be in either case (with regulations or with an unhindered flow of information) the final recipients of inside-generated information. The consequent marginal benefit of gaining access to insider information is quite low to any one investor. Additionally, as there are multitudes of investors, even if the information *could* be translated into profit opportunities, the ultimately minor benefit to each individual would likely prohibit organization to campaign for the regulation. Investors use the services of an investment house to both trade securities and gain information about them. They will opt for these intermediaries to campaign for increased information transparency on their behalf.

This new trichotomy of agents, their relative costs of organization and the expected costs or benefits to be sustained through insider trading legislation is summarized in table 1. While previous literature focuses primarily on the first and last groups – information creators (insiders) and users (outsiders) – our addition of information distributors allows us to see a potentially highly organized group with much to gain through the enactment of IT legislation.

New Group Formulation	Typical Agent	Costs of Organization	Benefit/Loss
1. Information creators	1. Management	Low	1. Loss of remuneration source
2. Information distributors	1. News outlets	Low	1. Increased demand for informational services
	2. Large investment firms	Medium	1. New line of business - transmitting information to clients 2. Increased demand for informational services 3. Additional service to attract clients (more secure cash flows) 4. Rents from transaction fees from clients using their services
3. Information users	1. Small investors	High (but allow investment firms to organize for them)	1. Still the last to receive information 2. Receive reduced "meaning" through information lacking context
	2. Large investment firms	Medium	1. Ability to trade on new information before creators

Table 1: Insider Trading Group Formulation

Despite the implied result that company insiders will have a reduced pool of profit opportunities, the group may still opt to support these laws. Redistribution may be supported to satisfy social norms. Hence, some companies may voluntarily partake in such action to increase their attractiveness to potential investors who view such an action as an attractive selling point.[9] Alternatively, altruism could drive the push for a voluntary redistribution of information. Insider trading laws strive to give everyone an even chance, akin to assigning handicaps in golf (Machan 1996). Companies will be enticed to sacrifice their own use of inside information if the market (outsiders) sufficiently values such information. Companies failing to follow suit would risk losing sales to companies that do follow such a rule.

The equilibrium likely to result has investment companies collectively support these rules

[9] This result is similar to the dictator game in Eichenberger and Oberholzer-Gee (1997).

as a type of insurance. As their institutional traders are continually competing against one another for the access to pertinent information, by advocating these regulations each ensures that they will gain information at the exact same time as everyone else. Although it may preclude *ex post* profits for some, IT legislation guarantees an equal opportunity *ex ante*. It alters the strategy from one of competition for early information to one of competition for the proper use and interpretation of such information.[10]

4 Conclusion

Insider trading legislation is fundamentally an issue of the redistribution of information. Much analysis to date has centered on the redistribution of monetary rents. As creators of information (insiders) are legally barred from acting upon it, others (outsiders) must do so. Lacking the additional knowledge necessary to discern the full meaning of this information, company outsiders may misuse inside information, leading to informational inefficiencies. A confusion between information and its profit-generating use has led to many conflicting and inconclusive studies concerning the effects of insider trading legislation.

With only ill-defined gains among market participants, the continued support (indeed, strengthening) of insider trading legislation creates a paradox. Haddock and Macey's (1987) political opportunity set provides a good starting point to understanding the origin of these laws. Separating company insiders from outsiders, relative bargaining positions determine the political consequences of each party's desired level of regulation. We have bolstered this analysis by shifting the focus awayfrom being solely concerned with *users* of information to a more holistic approach focusing on the three parties involved with the knowledge transmission process:

[10] The uncertainty of future success incentivizes one group to favor this insurance policy (Buchanan and Tullock 1962). Agents who expect their future income to be lower than the average favor this redistribution that shifts everyone's' income level to the middle, leaving no outliers (either rich or poor).

creators, distributors, and users of information.

Large investment houses and media outlets dominate the distributor group. These distributors, especially investment houses, gain in ways largely unavailable lacking a prohibition on insider trading. Information distributors garner fresh profits in two ways. First, through the direct use of this information as large distributors are among the first agents to gain access to it. Second, through indirect sales commissions and other fees earned on their clients' transactions based on this new information. As these firms are few in number and well organized, they maintain an increased ability to mount a political foray to secure these benefits for themselves.

By viewing interest groups involved with insider trading in light of this trichotomy– information creators, distributors and users – we gain insight into the true nature and causes behind the enactment and continued existence of these laws. This paper has not answered to what extent these agents are incentivized to support insider trading legislation based on this distinction of roles. It has provided a foundation upon which to identify and analyze where these distinct incentives originate, based upon these role distinctions.

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