

企业的 企业家—契约理论

张维迎 — 著

AN ENTREPRENEURIAL / CONTRACTUAL THEORY
OF THE FIRM

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张维迎

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ABSTRACT

A BRIEF DESCRIPTION OF THE THESIS

The firm is the typical organizational form of the market economy. The most significant characteristics of the firm are the asymmetric contractual arrangements between different participants (factor-owners) in both distribution of returns and control rights. Within the firm, some participants are called “employers” , while others are called “employees” . Employers hold “authority” over employees and are entitled to claim the residual returns, while employees are obliged to obey the authority of employers within certain limits and are entitled to fixed wages. In the terminology of principal-agent theory, employers are principals and employees are agents. This “micro” asymmetry between employers and employees directly determines a “macro” asymmetry. In society, employers belong to an upper-class, while employees belong to a lower-class. For this reason, this topic about the firm attracts attention not just from economists but also from sociologists, political scientists,

politicians and, in particular, social reformers.

The employment relationship takes place between capital and labour. An important question which has puzzled economists as well as others for long time is: why does capital hire labour rather than labour hire capital? This question is specially relevant today for two reasons. First, almost all socialist countries have experienced the failure of the socialist planned economy and have now begun a market-oriented reform program. Although Yugoslavia's experiment has shown that a labour-managed economy cannot be an efficient option, there is no guarantee that other socialist countries will not be attracted by the labour-hiring-capital system when they begin to deviate from the traditional planned economy. In particular, for ideological reasons, the labour-hiring-capital economy may be thought to be the only "acceptable" choice for some socialist countries. Secondly, in the joint-stock company, "ownership" is separated from management and the traditional conception of the employer is no longer as relevant as in the owner-managed firm. Instead, shareholders hire the management who in turn hire workers. That is, the traditional single agency relationship between a capitalist-entrepreneur and the workers has been replaced by an agency-chain between capitalists and management, and management and workers. Many economists have focused their attentions on how capitalists as the principal make an optimal incentive scheme to induce the management (agents) to act in their best interests, or how the managerial behaviour deviates from

shareholders' interests; but the most fundamental question is why the principalship should be assigned to capitalists rather than management in the first place. The logic behind this question is, if the firm's output does not directly depend on the actions taken by capitalists, why could not the incentive problem associated with the separation of ownership and management be solved by assigning the principalship to the management and let the management work for themselves? Or more generally, why do we need capitalists?

This thesis is intended to explore the elements determining the assignment of principalship within the firm: Why does capital hire labour rather than labour hire capital? Why does the entrepreneur monitor workers rather than workers monitor the entrepreneur? Why do capitalists rather than workers select the management of the firm? What factors determine who will be the entrepreneur in equilibrium? We are concerned with an economy in which all economic actions fall into two types: marketing and producing. By "marketing" we mean the activities of "discovering the relevant prices" [Coase (1937) , p. 390] including speculating about profitable opportunities, forecasting market demands and making "judgemental decisions" [Casson (1982)] of "what to do, and how to do it" [Knight (1921)], in Schumpeter's words, setting up a production function. By "producing" we mean all the activities of transforming inputs into outputs "physically" under the given production function (technology) and according to marketing decisions.

Individuals in the economy are assumed to differ in (1) their marketing ability (entrepreneurial ability) , denoted by θ ; (2) personal assets , denoted by W_o ; and (3) risk-attitudes, denoted by R . Because individuals differ in their marketing ability, it may be profitable for them to cooperate by setting up a “firm” through which individuals who have advantages in marketing specialize in making marketing decisions, while those who are not good at marketing specialize in producing (note that we assume that individuals are identical in their producing ability) . Because of “uncertainty” [Knight (1921)] and “team production” [Alchian and Demsetz (1972)], the firm involves an agency problem-some member may take actions (e. g. , shirking) which benefit himself but cost others. The key organizational issue is to design a contractual arrangement between different participants of the firm so as to make each member as responsible for his own actions as possible. We will argue that the member who does marketing should be assigned to be the principal to claim the residual return and to monitor others, not just because he is the major “risk-maker” but mainly because his actions are the most difficult to monitor. Thus he becomes the entrepreneur while those who do producing become the workers.

Under the assumption that personal assets W_o are costlessly observable for all individuals while marketing ability θ is private information (or observable only at some cost) , we will demonstrate that capitalists with high marketing ability will be the winners of

the competition for being the entrepreneurs because their costlessly observable capital stocks can work as a device to signal information about marketing ability of the would-be entrepreneur, and the arrangement therefore saves transaction costs. In other words, when information of ability is asymmetric between the insider and outsiders, only those would-be entrepreneurs who possess enough personal assets can be trusted as qualified entrepreneurs. Capitalists are more likely to be honest, credible, responsible and industrious when they choose to be entrepreneurs. They have less incentive to overstate their entrepreneurial ability, or to overinvest. A capitalist can earn "pure" profit, because his capital economizes on transaction costs by signaling information. In short, we show that capital-hiring-labour is a mechanism which guarantees that only qualified people will be chosen to be entrepreneurs (/managers) ; in contrast, if labour hires capital, the market for entrepreneurs (/managers) would be full of lemons (i. e. , too many unqualified people would choose to do marketing) .

Finally, we set up a general equilibrium entrepreneurial model of the firm, in which marketing ability θ , personal assets W_0 and risk-attitudes R are identified as the three key factors determining the choices of being an entrepreneur or a worker or a manager or a pure capitalist. We will show that there is a general equilibrium in which all individuals have their (constrained) optimal choices and different forms of the firm are chosen so that both the labour market and the capital market stay in equilibrium

(goods market equilibrium can be understood as a by-product of labour market equilibrium and capital market equilibrium) . In particular, we will show that the equilibrium relationships (both in pecuniary and non-pecuniary terms) between the firms' members depends on the joint distribution of marketing ability, personal wealth and risk attitudes in the population. Given asymmetry of distribution of entrepreneurial ability and distribution of personal wealth, the joint-stock company as a cooperation between capital and ability occurs if the costs of searching for high ability people are not prohibitively high. And it is also socially optimal to allow capitalists to select the management because the more personal assets a person holds, the more incentives he has in searching for high ability people. We argue that the major function of shareholders is to select a high ability manager rather than to monitor an incumbent manager.

The basic ideas of this thesis can be described by using a two-way classification of individuals (we omit the risk-attitude dimension) .

A Classification of Types

		Marketing Ability	
		θ_H	θ_L
Personal Wealth	W_{OH}	Type E: (θ_H, W_{OH}) Entrepreneurs	Type C: (θ_L, W_{OH}) Capitalists
	W_{OL}	Type M: (θ_H, W_{OL}) Managers	Type Z: (θ_L, W_{OL}) Workers

In Table 1.1, for simplicity, we assume that both marketing ability and personal wealth have two-point distributions: for any individual, θ takes one of two values, θ_H (high) or θ_L (low) ; similarly, W_o takes one

of two values, W_{OH} (rich) or W_{OL} (poor). Thus there exist four types of individuals, denoted by E , C , M and Z respectively. Type E individuals are rich in both marketing ability and personal wealth: (θ_H, W_{OH}) ; Type C are rich in personal wealth but short of marketing ability: (θ_L, W_{OH}) ; Type M have high marketing ability but low personal wealth: (θ_H, W_{OL}) ; Type Z are poor both in marketing ability and personal assets: (θ_L, W_{OL}) . If all transactions between individuals take place through spot-markets, each individual has to work as an individual businessman in dealing with both marketing and producing. Taking Type Z as the yard-stick, C has an advantage in capital factor, M 's advantage is in marketing ability, and E has advantages in both capital and marketing ability. Obviously it may be profitable for different types of individuals to cooperate by forming a "firm" in which some individuals are specialized in marketing activities while others are specialized in producing activities. Two problems associated with the firm are: first, how to allocate the marketing function and producing function to different members; second, how to resolve the agency problem by assigning principalship. What we are going to demonstrate is that, as the firm substitutes for the spot-market, (i) Type E become entrepreneurs by doing marketing, monitoring producing-members, and claiming the residual; (ii) Type M become managers by doing marketing, monitoring producing-members but being monitored by Type C , and sharing some risk with Type C ; (iii) Type C become capitalists by selecting and monitoring managers, and bearing risks;

Type *C* and Type *M* together become joint-entrepreneurs; and (iv) Type *Z* become workers by specializing in producing, and receiving a fixed return. We also show that bargaining power of each type depends on the joint distribution of θ and W_0 in population. For instance, an increase in the proportion of Type *C* but will disadvantage Type *C* but advantage Type *M* (managers) and probably Type *Z* (workers).

The thesis is organized as follows. In Chapter one, we give a brief description of the main ideas of the thesis and present a critical review of the existing theories of the firm (including the contractual theory, the entrepreneurial theory, and the managerial theory). Chapters 2-4 are the body of the thesis addressing how principalship (residual claim and authority) is assigned among the different members of the firm. Our demonstration consists of three major steps. In Chapter 2 (the first step), we demonstrate why principalship should be assigned to the marketing member rather than to the producing member to maximize total welfare (equivalently, to minimize agency costs). In so doing, we argue that differences of marketing ability between individuals are the original rationale for the occurrence of the firm; we identify marketing with Coase's "discovering the relevant prices" but focus on aspects ignored by Coase. We make a distinction between the self-monitored incentive and the being monitored incentive. We argue that there is a trade-off between the self-monitored incentive and the being-monitored incentive associated with assignment of principalship, and it is optimal

for the marketing member to be the principal because such a contractual arrangement can guarantee that total welfare are maximized. In Chapter 3 (the second step) , a hidden information model is used to show why priority in being entrepreneurs is given to capitalists. In so doing, we focus on how the capital endowment of a would-be entrepreneur can function as a signal of his marketing ability. Specifically we show that the individual critical ability for being an entrepreneur is increasing with his personal wealth, unless the individual's personal wealth exceeds a certain level. Under the assumption that marketing ability is not observable (or not costlessly observable) , it is shown that priority in being an entrepreneur (marketing member) and / or the right of selecting the person to undertake marketing should be given to capitalists because such a contractual arrangement can ensure that only qualified candidates win the competition for being entrepreneurs (or managers) . This conclusion implies that imperfect capital markets may be socially optimal. In Chapter 4 (the third step) , based on the arguments given in Chapters 2 and 3, a general equilibrium entrepreneurial model of the firm is set up; the main properties of the equilibrium will be derived; and the partition of the population into entrepreneurs, manager, pure capitalists and workers will be identified. We show that in equilibrium, (a) individuals with high ability, high personal wealth and low risk-aversion become entrepreneurs, (b) individuals with low ability, low personal wealth and high risk aversion become workers, (c) individuals

with high ability but low personal wealth become managers hired by capitalists, and (d) individuals with low ability but high personal wealth become “pure” capitalists to hire managers. Chapter 5 concludes the thesis and directs attention to some promising aspects for our future research.

One of the implications of our hypothesis is that because advantages of capital over labour are associated with information-cost saving, we may predict that these advantages will be diminishing as other signals become available. Education is one such signal, which may reveal some information on marketing ability and therefore help some MBA-holders to become managers. In the extreme case, if information is perfect, capital would become a pure production factor and would lose all its advantages over labour. In fact, in this case nobody has any advantages over others in marketing, and thereafter the firm becomes redundant in Coase's sense. However, if we believe that marketing is some kind of innate ability which is not entirely educable, capital will still enjoy advantages over labour in signaling information about a person's marketing ability.